

If there is no further deterioration in the credit risk of the borrower i.e. no subsequent changes to the lifetime expected credit losses, the entity recognises interest revenue at 6.49% per year on the net amortised cost carrying amount at the end of each year as follows:

Amortised Cost Carrying Amount Net of Loss Allowance				
Year	Opening balance	Interest revenue at 6.49%	Interest received	Closing balance
	RM	RM	RM	RM
1	8,700,000	564,868	(600,000)	8,664,868
2	8,664,868	562,587	(600,000)	8,627,455
3	8,627,455	560,158	(600,000)	8,587,613
4	8,587,613	557,571	(600,000)	8,545,184
5	8,545,184	554,816	(600,000)	8,500,000
		<u>2,800,000</u>	<u>(3,000,000)</u>	

If, at the end of year 5, the amount received from the borrower is RM9,000,000 the additional RM500,000 received is attributable to a favourable change in the lifetime expected credit losses on settlement [see IFRS 9.5.5.14]. Thus, the entity records the following closing journal:

	RM	RM
Dr Bank account	9,000,000	
Dr Loss allowance account	1,500,000	
Cr Loan receivable account		10,000,000
Cr Impairment gain in profit or loss		500,000

HEDGING AND HEDGE ACCOUNTING

This Chapter will help you in the following areas:

- to understand the basic principles of hedging and hedge accounting;
- to understand and apply the requirements on fair value hedges;
- to understand and apply the requirements on cash flow hedges;
- to understand and apply the requirements on hedges of net investment; and
- to be able to assess hedge effectiveness.

3.1 Introduction to Hedging and Hedge Accounting

3.1.1 Financial Risks

In the study of financial instruments, an understanding of financial risks is crucial, particularly in the area of hedging and hedge accounting. *Financial risks* refer to the volatility or variability of the fair values or future cash flows of financial instruments. MFRS 7 classifies financial risks into the following types:

- market risk*, which is the risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in market prices. Market risk comprises three types of risks:
 - currency risk*, which is the risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in foreign exchange rates.
 - interest rate risk*, which is the risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in market interest rates.
 - other price risk*, which is the risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in market prices (other than those arising from interest rate risk or currency risk), whether those changes are caused by factors specific to the individual financial instrument or its issuer, or factors affecting all similar financial instruments traded in the market.
- credit risk*, which is the risk that one party to the financial instrument will cause a financial loss for the other party by failing to discharge an obligation.
- liquidity risk*, which is the risk that an entity will encounter difficulty in meeting obligations associated with financial liabilities.

3.1.2 Basic Principles of Hedging

Hedging of financial risks typically involves using financial instruments (usually derivatives) that provide offsetting effects to the volatility of the fair value or future cash flows of a hedged item. Hedging has become an important part of risk management strategies for many entities.

The relationship between items exposed to risks (hedged items) and hedging instruments can be portrayed by the diagram below:



The objective of hedging is usually to take a position (the hedging instrument) that neutralises the risk, as far as possible, in the hedged item. In a perfect hedge, the risk is eliminated completely (100%). However, in practice, it is rare to find hedges that are perfect. Broadly, hedges can be categorised into “short hedges” and “long hedges”.

A *short hedge* involves taking a short or sell position in the hedging instrument (e.g. a short position in a futures contract or a forward contract). The aim of a short hedge is to protect a fall in the price of the underlying hedged item. A short hedge is appropriate when an entity already owns an asset and it wants to protect the risk that the price of the asset will fall in the future.

For example, an entity owns some CPO inventory that it knows will be sold within the next three months. To protect against the risk of a decline in the spot CPO price in the future when the inventory is sold, it can take a short position in the CPO futures before the inventory is sold. If the price of the CPO declines when the inventory is sold, the loss on sale is offset by the gain on the short hedge. Similarly, a short hedge can also be used to protect a decline in the price of a future transaction (forecast transaction). For example, a CPO producer may not own the inventory now but it knows that there will be inventory at some time in the future (its forecast production). It can therefore take a short position in a hedge to protect a risk of decline in the future CPO price when a sale is transacted.

A *long hedge* involves taking a long or buy position in the hedging instrument. The aim of a long hedge is to protect a rise in the price of the underlying hedged item. A long hedge is appropriate when an entity knows that it will have to purchase a certain asset and wants to lock in the price today.

For example, a CPO user knows that it will require a certain amount of CPO inventory for its usage in production. It may take a long position in the CPO futures now (lock in the price now) to protect against a rise in the CPO price when the inventory is purchased in the future.

3.1.3 What is Hedge Accounting?

Hedge accounting attempts to match the gain or loss of a hedged item (an item exposed to risk) with the corresponding loss or gain of its hedging instrument. It is thus concerned with the process of matching the offsetting effects of the hedging relationships in profit or loss. For example, if the gain or loss of the hedged item is taken to profit or loss, the loss or gain of the hedging instrument is also taken to profit or loss to provide the offsetting effect. However, if the hedge relates to a firm commitment to buy a property, plant and equipment, then the gain or loss of the hedging instrument is recognised in other comprehensive income and deferred in equity (a hedge reserve) until the property, plant or equipment is acquired. The hedge reserve may then be released as a basis adjustment to the cost of the property, plant and equipment, or by reclassification adjustments to profit or loss based on the depreciation charged in profit or loss.

The ultimate aim in hedge accounting is to realise a “matched” timing of recognition of gains and losses (the offsetting effects) in profit or loss between the hedged item and the corresponding hedging instrument. The main concern is to reduce the volatility in performance reporting. This can be accomplished in two ways:

- (a) a change in the fair value of the hedging instrument is recognised in profit or loss when it occurs, and at the same time, a corresponding but opposite change in the value attributable to the hedged risk of the hedged item is recognised in profit or loss (this is known as fair value hedge accounting); and
- (b) a change in the fair value of the hedging instrument is initially recognised in other comprehensive income and retained in a hedge reserve (in equity). When the corresponding hedged item affects profit or loss, the hedge reserve is recycled (reclassified) to profit or loss to realise the matching or offsetting effect in profit or loss (this is known as cash flow hedge accounting).

3.2 The New Hedge Accounting Model in MFRS 9

Compared to the former MFRS 139, MFRS 9 introduces a new hedge accounting model that is more principle-based and that aligns the hedge accounting requirements more closely to an entity’s risk management activities. The new model specifies that the objective of hedge accounting is to represent, in the financial statements, the effect of an entity’s risk management activities that use financial instruments to manage exposures arising from particular risks that could affect profit or loss (or OCI, in the case of investments in equity instruments for which an entity has elected to present changes in fair value in OCI) [MFRS 9.6.1.1].

This is a principle-based rather than a rule-based approach that focuses on an entity’s risk management. The new hedge accounting model uses the risk management activities of an entity as the foundation for deciding what qualifies (or what does not qualify) for hedge accounting. The aim of the model is to faithfully represent, in the financial statements, the impact of the risk management activities of an entity.

3.2.1 Qualifying Hedging Instruments

Hedging instruments are typically derivative instruments, such as forwards, futures, swaps and options that can provide off-setting effects to gain or loss of hedged items exposed to risks. The former MFRS 139 restricted certain instruments for qualifying as hedging instruments even when such financial instruments provided an effective offset for risks managed under common risk management strategies. The key restriction in the former MFRS 139 was the disallowance of designating non-derivative instruments as hedging instruments for hedges of risks other than foreign currency risk.

MFRS 9 prescribes that a derivative measured at fair value through profit or loss may be designated as a hedging instrument, except for some written put options [MFRS 9.6.2.1]. It also specifies that a non-derivative financial asset or a non-derivative financial liability measured at fair value through profit or loss may be designated as a hedging instrument unless it is a financial liability designated at fair value through profit or loss for which the amount of its change in fair value that is attributable to changes in the credit risk of that liability is presented in OCI. For a hedge of foreign currency risk, the foreign currency risk component of a non-derivative financial asset or a non-derivative financial liability may be designated as a hedging instrument provided that it is not an investment in an equity instrument for which an entity has elected to present changes in fair value in OCI [MFRS 9.6.2.2].

The new hedge accounting model thus expands the types of eligible financial instruments to allow non-derivative financial assets and liabilities at fair value through profit or loss to be designated as hedging instruments, i.e. to acknowledge their effect also for accounting purposes. As in the former MFRS 139, MFRS 9 requires that for hedge accounting purposes, only contracts with a party external to the reporting entity (i.e. external to the group or individual entity that is being reported on) can be designated as hedging instruments [MFRS 9.6.2.3].

The other key change in the new hedge accounting model is the removal of the distinction between combinations of stand-alone written and purchased options and those combined in one contract. In the new model, the eligibility of an option contract to be designated as a hedging instrument should depend on its economic substance and risk management objectives rather than its legal form alone. Consequently a stand-alone written option would be eligible for designation as a hedging instrument if it is jointly designated with other hedging instruments so that, in combination, they do not result in a net written option.

3.2.1.1 Designation of Hedging Instruments

The condition for designation of a hedging instrument in MFRS 9 is similar to those in the former MFRS 139 in that a qualifying instrument must be designated in its entirety as a hedging instrument. For example, an option contract may be designated as a hedging instrument in its entirety without separating the intrinsic value and the time value of the option. Similarly, a forward contract may be designated as a hedging instrument in its entirety without separating the forward element and the spot element in the forward contract.

However, MFRS 9 provides for the following exceptions (non-mandatory but permitted):

- Separating the intrinsic value and time value of an option contract and designating as the hedging instrument only the change in intrinsic value of an option and not the change in its time value.
- Separating the forward element and the spot element of a forward contract and designating as the hedging instrument only the change in the value of the spot element of a forward contract and not the forward element; similarly, the foreign currency basis spread may be separated and excluded from the designation of a financial instrument as the hedging instrument.
- A proportion of the entire hedging instrument, such as 50 per cent of the nominal amount, may be designated as the hedging instrument in a hedging relationship. However, a hedging instrument may not be designated for a part of its change in fair value that results from only a portion of the time period during which the hedging instrument remains outstanding [MFRS 9.6.2.4].

MFRS 9 further allows an entity to view a combination, and jointly designate as the hedging instrument, any combination of derivatives (or a proportion of them) and non-derivatives (or a proportion of them), including those circumstances in which the risk or risks arising from some hedging instruments offset those arising from others [MFRS 9.6.2.5]. However, it clarifies that a derivative instrument that combines a written put option and a purchased option (for example, an interest rate collar) does not qualify as a hedging instrument if it is, in effect, a net written option at the date designation. Similarly, two or more instruments (or proportions of them) may be jointly designated as the hedging instrument only if, in combination, they are not, in effect, a net written put option at the date of designation [MFRS 9.6.2.6].

3.2.2 Qualifying Hedged Items

Like the former MFRS 139, MFRS 9 prescribes that a hedged item can be a recognised asset or liability, an unrecognised firm commitment, a forecast transaction or a net investment in a foreign operation. The hedged item can be:

- a single item (such as a loan denominated in a foreign currency that is exposed to currency risk); or
- a group of items (that share the same risk, such as a portfolio of bonds that share similar interest rate risk).

A hedged item can also be a component of such an item or group of items [MFRS 9.6.3.1]. The other conditions for hedged items are similar to those in the former MFRS 139, and these include measurement reliability of the hedged item, forecast transaction must be highly probable and that involve transaction with external parties, etc.

The term “highly probable” implies a significantly high degree of probability for the occurrence of a forecast transaction. An element of judgement is required when assessing whether a forecast transaction is highly probable to occur. This may be based on similar transactions in the past and supported with recent evidence that chances of the occurrence are high. For example, if an entity’s past sales in the first quarter of a financial year average about USD 30 million, designating forecast sales of USD 30 million or less for the first quarter would be more probable to occur than designating forecast sales of more than USD 30 million. Similarly, designating forecast transactions for a shorter period, such as purchases for one year, would be more probable to occur than designating forecast transactions for a longer period, such as forecast purchases for two years.

A key change introduced in the new model is to align the treatment of financial and non-financial items to allow the hedging or risk components in non-financial items, when they are separately identifiable and reliably measurable. This change will enable such hedges to be reflected in the designation used for hedge accounting, thereby enabling preparers to better reflect and users to better understand the actual risk management activity and the effectiveness of hedging strategies. Also, groups of items (including net positions) would be eligible for hedge accounting.

3.2.2.1 Designation of Hedged Items

MFRS 9 allows an entity to designate an item in its entirety or a component of an item as the hedged item in a hedging relationship. An entire item comprises all changes in cash flows or fair value of an item. A component comprises less than the entire fair value change or cash flow variability of an item. In that case, an entity may designate only the following types of components (including combinations) as hedged items:

- only changes in the cash flows or fair value of an item attributable to a specific risk or risks (risk component), provided that, based on an assessment within the context of the particular market structure, the risk component is separately identifiable and reliably measurable. Risk components include a designation of only changes in the cash flows or the fair value of a hedged item above or below a specified price or other variable (a one-sided risk).
- one or more selected contractual cash flows.
- components of a nominal amount i.e. a specified part of the amount of an item [MFRS 9.6.3.7].

The items identified for hedging shall be specifically designated. This requires, among others, specifying the portion of the cash flows or fair value, the amount of the currency or other variables, and the specific financial risks being hedged. For example, in a cash flow hedge of forecast sales that are expected to occur in the following year, the entity must specify the amount (for example, the first USD 10,000,000 sales in the first quarter) of the forecast sales to be hedged rather than specifying a percentage of the forecast sales to be hedged.

3.2.3 Qualifying Criteria for Hedge Accounting

A hedging relationship qualifies for hedge accounting only if all of the following criteria are met:

- The hedging relationship consists only of eligible hedging instruments and eligible hedged items.
- At the inception of the hedging relationship there is formal designation and documentation of the hedging relationship and the entity’s risk management objective and strategy for undertaking the hedge. That documentation shall include identification of the hedging instrument, the hedge item, the nature of the risk being hedged and how the entity will assess whether the hedging relationship meets the hedge effectiveness requirements (including its analysis of the sources of hedge ineffectiveness and how it determines the hedge ratio).

- (c) The hedging relationship meets all of the following hedge effectiveness requirements:
- there is an economic relationship between the hedged item and the hedging instruments;
 - the effect of credit risk does not dominate the value of changes that result from that economic relationship;
 - the hedge ratio of the hedging relationship is the same as that resulting from the quantity of the hedged item that the entity actually hedges and the quantity of the hedging instrument that the entity actually uses to hedge that quantity of hedged item. However, that designation shall not reflect an imbalance between the weightings of the hedged item and hedging instruments that would create hedge ineffectiveness (irrespective of whether recognised or not) that could result in an accounting outcome that would be inconsistent with the purpose of hedge accounting [MFRS 9.6.4.1].

3.2.3.1 Hedge Effectiveness

Hedge effectiveness is the extent to which changes in the fair value or the cash flows of the hedging instrument offset changes in the fair value or the cash flows of the hedged item (for example, when the hedged item is a risk component, the relevant change in fair value or cash flows of an item is the one that is attributable to the hedged risk). Hedge ineffectiveness is the extent to which the changes in the fair value or the cash flows of the hedging instrument are greater or less than those on the hedged item [MFRS 9.B6.4.1].

When designating a hedging relationship and on an ongoing basis, an entity shall analyse the sources of hedge ineffectiveness that are expected to affect the hedging relationship during its term. This analysis (including any updates arising from rebalancing a hedging relationship) is the basis for the entity's assessment of meeting the hedge effectiveness requirements [MFRS 9.B6.4.2].

3.2.3.2 Economic Relationship Between the Hedged Item and the Hedging Instrument

The requirement that an economic relationship exists means that the hedging instrument and the hedged item have values that generally move in the opposite direction because of the same risk, which is the hedged risk. Hence, there must be an expectation that the value of the hedging instrument and the value of the hedged item will systematically change in response to movements in either the same underlying or underlyings that are economically related in such a way that they respond in a similar way to the risk that is being hedged (for example, Brent and WTI crude oil) [MFRS 9.B6.4.4]. If an entity is in the long position in the underlying hedged item, it should take a short position in the hedging instrument for the economic relationship to exist.

If the underlyings are not the same but are economically related, there can be situations in which the values of the hedging instrument and the hedged item move in the same direction, for example, because the price differential between the two related underlyings changes while the underlyings themselves do not move significantly. That is still consistent with an economic relationship between the hedging instrument and the hedged item if the values of the hedging instrument and the hedged item are still expected to typically move in the opposite direction when the underlyings move [MFRS 9.B6.4.5].

The assessment of whether an economic relationship exists includes an analysis of the possible behaviour of the hedging relationship during its term to ascertain whether it can be expected to meet the risk management objective. The mere existence of a statistical correlation between two variables does not, by itself, support a valid conclusion that an economic relationship exists [MFRS 9.B6.4.6].

3.2.3.3 The Effect of Credit Risk

Because the hedge accounting model is based on a general notion of offset between gains and losses on the hedging instrument and the hedged item, hedge effectiveness is determined not only by the economic relationship between those items (i.e. the changes in their underlyings) but also by the effect of credit risk

on the value of both the hedging instrument and the hedged item. The effect of credit risk means that even if there is an economic relationship between the hedging instrument and the hedged item, the level of offset might become erratic. This can result from a change in the credit risk of either the hedging instrument or the hedged item that is of such a magnitude that the credit risk dominates the value changes that result from the economic relationship (i.e. the effect of the changes in the underlyings). A level of magnitude that gives rise to dominance is one that would result in the loss (or gain) from credit risk frustrating the effect of changes in the underlyings on the value of the hedging instrument or the hedged item, even if those changes were significant. Conversely, if during a particular period there is little change in the underlyings, the fact that even small credit risk-related changes in the value of the hedging instrument or the hedged item might affect the value more than the underlyings does not create dominance [MFRS 9.B6.4.7].

An example of credit risk dominating a hedging relationship is when an entity hedges an exposure to commodity price risk using an uncollateralised derivative. If the counterparty to that derivative experiences a severe deterioration in its credit standing, the effect of the changes in the counterparty's credit standing might outweigh the effect of changes in the commodity price on the fair value of the hedging instrument, whereas changes in the value of the hedged item depend largely on the commodity price changes [MFRS 9.B6.4.8].

3.2.3.4 Hedge Ratio

In accordance with the hedge effectiveness requirements, the hedge ratio of the hedging relationship must be the same as that resulting from the quantity of the hedged item that the entity actually hedges and the quantity of the hedging instrument that the entity actually uses to hedge that quantity of hedged item. Hence, if an entity hedges less than 100 per cent of the exposure on an item, such as 85 per cent, it shall designate the hedging relationship using a hedge ratio that is the same as that resulting from 85 per cent of the exposure and the quantity of the hedging instrument that the entity actually uses to hedge those 85 per cent. Similarly, if, for example, an entity hedges an exposure using a nominal amount of 40 units of a financial instrument, it shall designate the hedging relationship using a hedge ratio that is the same as that resulting from that quantity of 40 units (i.e. the entity must not use a hedge ratio based on a higher quantity of units that it might hold in total or a lower quantity of units) and the quantity of the hedged item that it actually hedges with those 40 units [MFRS 9.B6.4.9].

However, the designation of the hedging relationship using the same hedge ratio as that resulting from the quantities of the hedged item and the hedging instrument that the entity actually uses shall not reflect an imbalance between the weightings of the hedged item and the hedging instrument that would in turn create hedge ineffectiveness (irrespective of whether recognised or not) that could result in an accounting outcome that would be inconsistent with the purpose of hedge accounting. Hence, for the purpose of designating a hedging relationship, an entity must adjust the hedge ratio that results from the quantities of the hedged item and the hedging instrument that the entity actually uses if that is needed to avoid such an imbalance [MFRS 9.B6.4.10].

Examples of relevant considerations in assessing whether an accounting outcome is inconsistent with the purpose of hedge accounting are:

- whether the intended hedge ratio is established to avoid recognising hedge ineffectiveness for cash flow hedges, or to achieve fair value hedge adjustments for more hedged items with the aim of increasing the use of fair value accounting, but without offsetting fair value changes of the hedging instrument; and
- whether there is a commercial reason for the particular weightings of the hedged item and the hedging instrument, even though that creates hedge ineffectiveness. For example, an entity enters into and designates a quantity of the hedging instrument that is not the quantity that it determined as the best hedge of the hedged item because the standard volume of the hedging instruments does not allow it to enter into that exact quantity of hedging instrument (a 'lot size issue'). An example is an entity that

hedges 100 tonnes of coffee purchases with standard coffee futures contracts that have a contract size of 37,500 lbs (pounds). The entity could only use either five or six contracts (equivalent to 85.0 and 102.1 tonnes respectively) to hedge the purchase volume of 100 tonnes. In that case, the entity designates the hedging relationship using the hedge ratio that results from the number of coffee futures contracts that it actually uses, because the hedge ineffectiveness resulting from the mismatch in the weightings of the hedged item and the hedging instrument would not result in an accounting outcome that is inconsistent with the purpose of hedge accounting [MFRS 9.B6.4.11].

A hedge is regarded as highly effective only if both the following conditions are met:

- Prospective Testing** — At the inception of the hedge and on an on-going basis (as a minimum, at each subsequent reporting periods, such as quarterly), the hedge is expected to be highly effective in achieving offsetting changes in fair value or cash flows attributable to the hedged risk during the period for which the hedge is designated. Such an expectation can be demonstrated in various ways, including comparison of past changes of the hedged item with past changes of the hedging instrument, demonstrating a high statistical correlation between the fair value or cash flows of the hedged item and those of the hedging instrument. Other than a one to one comparison, the entity may choose a hedge ratio to improve the effectiveness of the hedge.
- Retrospective Testing** — The actual results of the hedge offsetting effects are within the targeted effectiveness specified by the entity (the former MFRS 139 specified a range of 80–125 per cent offsetting effect). An entity may continue to use the 80 to 125% as an internal guide for assessing hedge effectiveness. For example, if the loss on the hedging instrument is RM2,000 whilst the gain on the hedged item is RM2,400, the offset can be measured by $2,000 / 2,400$, which is 83.3%, or $2,400 / 2,000$, which is 120%. In this example, the offsetting effect falls with the range of 80–125% and would be concluded as highly effective.

3.3 Hedging Relationships

Like the former MFRS 139, MFRS 9 identifies three types of hedging relationships, as follows:

- fair value hedge**: a hedge of the exposure to changes in fair value of a recognised asset or liability or an unrecognised firm commitment, or a component of any such item, that is attributable to a particular risk and could affect profit or loss.
- cash flow hedge**: a hedge of the exposure to variability in cash flows that is attributable to a particular risk associated with all, or a component of, a recognised asset or liability (such as all or some future interest payments on variable-rate debt) or a highly probable forecast transaction, and could affect profit or loss.
- hedge of a net investment in a foreign operation** as defined in MFRS 121 [MFRS 9.6.5.2].

If the hedged item is an equity instrument for which an entity has elected to present changes in fair value in other comprehensive income, the hedged exposure must be one that could affect other comprehensive income. In that case, and only in that case, the recognised hedge ineffectiveness is presented in other comprehensive income [MFRS 9.6.5.3].

For a hedge of the foreign currency risk of a firm commitment, the Standard allows a choice of accounting for it as a fair value hedge or a cash flow hedge. All other hedges of firm commitments shall be accounted for as fair value hedges.

3.4 Fair Value Hedge Accounting

3.4.1 The Accounting Treatments

MFRS 9 prescribes that as long as a fair value hedge meets the qualifying criteria for hedge accounting, the hedging relationship shall be accounted for as follows:

- The gain or loss on the hedging instrument shall be recognised in profit or loss (or other comprehensive income, if the hedging instrument hedges an equity instrument for which an entity has elected to present changes in fair value in other comprehensive income).
- The hedging gain or loss on the hedged item shall adjust the carrying amount of the hedged item (if applicable) and be recognised in profit or loss. If the hedged item is a financial asset (or a component thereof) that is measured at fair value through other comprehensive income, the hedging gain or loss on the hedged item shall be recognised in profit or loss. However, if the hedged item is an equity instrument for which an entity has elected to present changes in fair value in other comprehensive income, those amounts shall remain in other comprehensive income. When a hedged item is an unrecognised firm commitment (or a component thereof), the cumulative change in the fair value of the hedged item subsequent to its designation is recognised as an asset or a liability with a corresponding gain or loss recognised in profit or loss [MFRS 9.6.5.8].

When a hedged item in a fair value hedge is a firm commitment (or a component thereof) to acquire an asset or assume a liability, the initial carrying amount of the asset or the liability that results from the entity meeting the firm commitment is adjusted to include the cumulative change in the fair value of the hedged item that was recognised in the statement of financial position [MFRS 9.6.5.9].

Any adjustment arising from paragraph 6.5.8(b) shall be amortised to profit or loss if the hedged item is a financial instrument (or a component thereof) measured at amortised cost. Amortisation may begin as soon as an adjustment exists and shall begin no later than when the hedged item ceases to be adjusted for hedging gains and losses. The amortisation is based on a recalculated effective interest rate at the date that amortisation begins. In the case of a financial asset (or a component thereof) that is a hedged item and that is measured at fair value through other comprehensive income, amortisation applies in the same manner but to the amount that represents the cumulative gain or loss previously recognised instead of by adjusting the carrying amount [MFRS 9.6.5.10].

3.4.2 Fair Value Hedge of Price Risk of Quoted Equity Investments

The Standard does not provide requirements for hedging of equity investments measured at fair value through profit or loss. Hedging of such financial assets would generally be inconsistent with an entity's business model objective of investing in quoted equity instruments for trading purposes. In any case, hedge accounting requirement is redundant because both the gain or loss of a hedging instrument and the corresponding loss or gain on the equity investments would be recognised in profit or loss when they arise.

Hedge accounting would be applicable to designated equity investments measured at fair value through other comprehensive income. In this case, the offsetting effects of the hedging relationship shall also be recognised in other comprehensive income.

Example 1

At the beginning of quarter 1, Hams Bhd purchases 50,000 ordinary shares of LDP Bhd at a price of RM5 per share inclusive of transaction cost. The investment is designated as an equity investment and changes in fair value are recognised in other comprehensive income and remain in a fair value reserve. At the end of quarter 1, the closing price of LDP's ordinary shares is RM6.

	20X9	20X8
	RM'000	RM'000
Weighted average number of shares for the basic EPS calculation	4,000	4,000
Shares issuable on assumed conversion of convertible bonds	112,000	100,000
Shares deemed issued for no consideration on assumed exercise of warrants and options	20,000	15,000
Weighted average number of shares for the diluted EPS calculation	13,000	5,000
	<u>145,000</u>	<u>120,000</u>

CHAPTER 6

SHARE AND BUSINESS VALUATION

This Chapter will help you to:

- to understand the fundamental theories of share prices in the marketplace;
- to understand the reasons for share and business valuation;
- to understand the approaches and methods of shares and business valuation;
- to apply the assets-based methods of share and business valuation; and
- to apply the earnings-based methods of share and business valuation.

6.1 The Fundamental Theories of Share Prices in the Marketplace

The fundamental theories of share valuation seek to explain the elements of market valuation of shares i.e. to explain the way in which the market price of a share is set in the marketplace and the reasons for the price fluctuations. In these theories, the price of a share in the market is dependent upon the cash flows investors expect to receive if they buy the share and the riskiness of those expected cash flows. The expected cash flows consist of two elements: (a) the dividends expected in each year, and (b) the price the investors expect to receive when they eventually sell their shares. The models for share valuation under the fundamental theories include: (a) constant dividend valuation model; (b) normal or constant dividend growth model (known as the Gordon's growth model); and (c) the supernormal growth model.

6.1.1 The Constant Dividend Valuation Model

This model assumes the entity that is the subject of the valuation pays a constant dividend over time. The model discounts the constant dividend to perpetuity by the investors' current required rate of return i.e. the current cost of equity for that entity in the marketplace. The discount rate must take into account the risk-free rate (for the time value of money) and the risk premium that reflects market assessment of the risks (both operating and financial risks) for investing in the entity.

Mathematically, the price of a share using this model is:

$$P_0 (\text{ex-div}) = \sum_{t=1}^{\infty} \frac{D}{(1 + K_e)^t} = \frac{D}{K_e}$$

Where P_0 (ex-div): Price ex-dividend

D: The constant dividend

K_e : Market required rate of return, which is the cost of equity

If the shares are traded cum-dividend, the formula is adjusted for the current dividend as follows:

$$Po \text{ (cum-div)} = \frac{D}{Ke} + D$$

For example, if an entity pays a constant dividend of 50 sen each year and the market required rate of return for the entity's shares is 8%, the price = $RM0.50 / .08 = RM6.25$.

6.1.2 The Normal (or Gordon's) Growth Model

This model assumes that earnings and dividends of an entity grow at a constant rate over time. If the discount rate is the same, an entity that pays increasing dividends over time would have a higher share price than an entity that pays a constant dividend. If Do is the current dividend which has just been paid, and g is the constant growth rate, the dividend expected at the end of year 1 would be $D_1 = Do(1 + g)^1$, and the expected dividend at the end of year 2 would be $D_2 = Do(1 + g)^2$, and so on. Mathematically, the price of a share using this model is as follows:

$$Po \text{ (ex-div)} = \frac{D_1}{(1 + Ke)^1} + \frac{D_2}{(1 + Ke)^2} + \frac{D_3}{(1 + Ke)^3} + \dots + \frac{D_n + P_n}{(1 + Ke)^n}$$

Where D_1 to D_n are the stream of dividends growing at a constant rate of g , with $D_1 = Do(1 + g)$ and n is the year sale is expected. The above formula is simplified as follows:

$$Po \text{ (ex-div)} = \frac{D_1}{Ke - g} = \frac{Do(1+g)}{Ke - g}$$

$$Po \text{ (cum-div)} = \frac{D_1}{Ke - g} + Do$$

For example, if an entity pays a current dividend of 50 sen, and dividend is expected to grow at a constant rate of 3%. If the required rate of return is 8%, the share value $Po = RM0.50(1.03) / (.08 - .03) = RM10.30$.

This model is not suitable to explain the share price if the growth rate is close to, or as high as, the required rate of return. For example, in the above case, if the growth rate is 7%, then $Po = RM53.30$, which is a ridiculously high valuation. And if the growth rate is equal to the required rate of return, the formula collapses as the denominator becomes a zero rate (anything divided by zero will result in an infinity value).

6.1.3 The Supernormal Dividend Growth Model

This model assumes that an entity is in the early stages of development and is experiencing supernormal growth in earnings and dividends in the earlier years before the growth rate tapers off to a normal rate in the later stages. The valuation of the shares for such entity must take into account the value provided by these supernormal growth periods before the normal growth model is applied.

For example, if an entity is expected to grow at a supernormal rate of 15% for the first 5 years and thereafter a normal growth rate of 4%, the valuation of the shares of the entity is determined as follows:

$$Po = \sum_{t=1}^n \frac{Do(1+Gs)^t}{(1 + Ke)^t} + \frac{D_{n+1}}{(Ke - Gn)} \times \frac{1}{(1 + Ke)^n}$$

Where: G_s Supernormal growth rate of 15%
 G_n Normal growth rate of 4%
 n No. of years supernormal growth is expected, 5 years in this example.

Example 1

Entity K has just paid a current dividend of 20 sen per share. In line with the expected growth in earnings, dividends are expected to grow at 15% per year for the first five years, and thereafter taper off to 4% indefinitely. The investors' expected rate of return for investment in Entity K with the degree of risk is 9%.

Required:

Calculate the expected share price of Entity K.

Solution:

Year	Cash flows
Supernormal:	Sen
1	23.00
2	26.45
3	30.42
4	34.98
5	40.23
NPV at 9% (a)	117.78
Normal:	
Year 6 onward	41.84
Ke - Gn	5%
Year 5 value	836.72
Discount factor	0.650
Present value (b)	543.81
Total value (a + b)	661.59

The expected share price is RM6.62.

The above fundamental models of share price attempt to explain that at any particular point in time, a share has an intrinsic value. This value is equal to the discounted present value of the expected future cash receipts from investing in the share. The expectation of the future cash receipts depends upon the investors' perception of the risk-return relationship of the entity and this may relate to:

- Past earnings of the entity;
- Analysis of the entity's latest financial statements;
- Future plans and opportunities and treats to the entity; and
- Influences affecting the economy or industry in which the entity operates, and so on.

These factors affect an investor's expectations about the future earnings and the risk associated with such earnings. Consequently, the variables in the models, such as K_e , D and g would change with changes in the investors' expectations, and as a result the intrinsic value or price of the share may move up or down or sideways in a random walk pattern.

6.2 The Efficient Market Hypothesis

In order for the shares of an entity to be traded at its intrinsic value, the capital markets must be efficient. Basically, efficient markets exist when security prices reflect all available public information about the economy, about financial markets, and about the specific entity. Implied in this efficient market hypothesis is that market prices of individual securities adjust very rapidly to new information. As a result, securities prices are said to fluctuate randomly around their intrinsic values.

Under the fundamental theory of share valuation, a share is said to have an intrinsic price dependent on the fortune of the entity and the expectations of the investors. In order for the price of a share to be at its intrinsic value, one of the fundamental assumptions is that all relevant information about an entity will be available to all potential investors who will act upon the information in a rational manner.

The random walk theory accepts that shares will have an intrinsic value but that this value will be altered as new information becomes available and that the behaviour of investors is such that the actual price will fluctuate at random around the intrinsic value. New information can result in a change in the intrinsic value of a share, but subsequent share price movements will follow what is known as a random walk. The efficient market theories therefore imply that past security price movements cannot be used to predict future market prices in such a way as to earn excess profits from these predictions. If excess profits arise, the efficient market theories argue that the excess profits cannot last long, because a sufficient number of market participants with sufficient resources will recognise the recurring pattern of price changes and will exploit the opportunity. It exploiting it, they will drive out the opportunity for further excess profits, causing the price series to approximate a random walk. Thus, competitive forces are said to result in an efficient market.

The sufficient conditions for such a market are that: (a) there are no transaction costs, (b) information is available to all participants at no cost, and (c) all participants agree on the implications of available information for the current and future price of each security. Obviously, these conditions are not entirely met in practice. While security markets clearly would be efficient in the sense that security prices fully reflect all available information if they were met, in reality such markets may be considered as efficient if these conditions are only reasonably met. To determine this, three forms of efficient market hypotheses have been extensively tested for empirical evidence in the finance area.

6.2.1 The Weak Form Hypothesis

The weak form hypothesis is based on the view that security prices already reflect all past publicly available information. This hypothesis involves testing the dependence of successive share price changes over time and whether or not mechanical trading rules using past price changes can earn excess profits. The weak-form tests conducted in many jurisdictions have largely supported the notion that share price changes are independently distributed random variables. As a result of these tests, the currently observed share price is said to be the best estimate of the intrinsic value of that share. Stated differently, the test results suggest that a share price series evidences random fluctuations about the intrinsic value and it changes as new information becomes available.

6.2.2 The Semi-Strong Form Hypothesis

The semi-strong form hypothesis is concerned with testing the speed of price adjustments to new information that is released in the marketplace. Such studies have focussed on changes in share prices relative to specific types of information, after isolating out systematic underlying market movements. The types of

information examined include stock splits, annual and quarterly announcements, differing forms of reported earnings, large company offerings of common stocks, new issue of shares, and new listings on a major stock exchange. Most of the semi-strong form tests in the developed economies have shown that share prices do react very quickly to publicly announced information and thus supports the efficient market theory i.e. share prices reflect all information which is available publicly.

6.2.3 The Strong Form Hypothesis

The strong form hypothesis is concerned with testing whether share prices reflect all available information, i.e. whether public or private information are reflected in the share price of an entity. The test in this hypothesis is whether certain individuals who have monopolistic ability to obtain private information are able to earn excess profits. Tests involving professional mutual funds managers suggest that such managers do not outperformed randomly selected portfolios. Some tests involving specialists on a stock exchange and insiders (corporate officers and directors) suggest that such parties having monopolistic excess to private information are able to use it to generate moderate excess profits. However, such testing is extremely limited because of the sensitive nature of those privileged information. Thus, the results of strong form tests are not conclusive to support the notion that share prices reflect all available information.

6.2.4 Efficient Markets — A Summing Up

On balance, the evidence indicates that the market for shares, particularly those listed shares, is efficient. This is particularly true in the weak-form and the semi-strong form tests. Security prices reasonably reflect all available public information and market prices adjust very quickly to new information. Market participants are generally ready to seize on any recurring price pattern so as to drive price changes about a security's intrinsic value to a random walk.

6.3 Practical Approaches to Share and Business Valuation

6.3.1 Reasons for Share and Business Valuation

Given that shares have an intrinsic value in the marketplace, why is there a need to devise techniques to estimate the value of a share? Very often in business transactions, the purpose of share valuation is not just confined to buying, holding or selling shares in the markets. Share or business valuation is needed in many other business transactions, such as in acquisitions and mergers of businesses, in initial public offering of shares, in transactions for exchanges of non-monetary assets, in debt to equity swap transactions, in financial reporting when investments in subsidiaries, joint ventures, associates and available-for-sale unquoted equity instruments need to be fair valued at the end of each reporting period, etc. An acquirer in a business combination may want to know how much he is willing to pay for a controlling stake in an acquiree, whilst the owners of an acquiree may need to know the minimum price for the shares in the acquiree if they were to sell the investee.

The techniques used may not necessarily follow those of the fundamental theory and the value derived may not be the same as the current market price, but it forms the basis of negotiations between the relevant parties, who will eventually settle on an agreed price. Also, the size of the investment at stake many dictate the techniques which are more appropriate in the particular circumstances.

6.3.2 Approaches to Share and Business Valuation

There are many techniques or methods of share and business valuation, depending on the approach applied. MFRS 13 *Fair Value Measurement* clarifies that the approaches that can be used in financial reporting include: (a) the market approach, (b) the income approach, and (c) the cost approach.

(a) The Market Approach

In the valuation of assets, liabilities and equity instruments, MFRS 13 clarifies that the market approach uses prices and other relevant information generated by market transactions involving identical or comparable (i.e. similar) assets, liabilities or a group of assets and liabilities, such as a business [MFRS 13.B5]. Valuation techniques consistent with the market approach often use market multiples derived from a set of comparables. Multiples might be in ranges with a different multiple for each comparable. The selection of the appropriate multiple within the range requires judgement, considering qualitative and quantitative factors specific to the measurement.

For example, in valuing shares of an unlisted entity, a market approach would consider market prices of the shares of listed entities in the same line of business as the unquoted entity. A market-based multiple of "market price-to-net asset value" ratio may be used as a basis in the valuation, considering differences in risks and lack of liquidity that market participants would factor in when comparing listed and unlisted companies.

(b) The Income Approach

An income approach to valuation converts future amounts (e.g. cash flows or earnings) to a single current (i.e. discounted) amount. When the income approach is used, the fair value measurement must reflect current market expectations about those future amounts [MFRS 13.B10]. This means that risks and uncertainties of the future amount must be factored in the valuation.

For valuing shares of unlisted entities, the techniques that can be used include: (a) the present value techniques; and (b) the multiple-period excess earnings method (this method may also be used to estimate the fair value of an intangible asset).

(c) The Cost Approach

The cost approach reflects the amount that would be required currently to replace the service capacity of an asset (often referred to as current replacement cost) [MFRS 13.B8]. This approach may be suitable for valuing tangible property, plant and equipment, but is not normally applied for valuing equity shares. The only exception may be when the shares are of a recent transaction and there have been no significant changes in the investee's performance or condition; in which case, the cost (i.e. the price paid for the shares acquired, which is the entry price) may approximate the fair value (i.e. the exit price).

The techniques or methods that have been used in share and business valuation can be categorised broadly into: (a) the assets-based methods, and (b) the earnings-based methods. Each method will derive a value that may be different from other methods. In practice of share or business valuation, it is unlikely that a method is used in isolation; several valuations may be performed, each using a different technique and different assumptions. The valuations under the different methods will then be compared and a final price may be reached based on judgements or negotiations between the relevant parties. Valuation of shares or businesses is not an exact science and there is no such thing as the perfect value.

6.3.3 Assets-Based Valuation Methods

Assets-based methods attempt to place a value of a share or business by looking at the values of assets and liabilities in the statement of financial position of the entity that is being valued. They are based on the notion that if all the assets are realised at their fair values and all the liabilities are settled at their fair values, the residual that remains is the value attributable to owners of the entity. The methods in this category include: (a) net tangible asset method, and (b) the net asset value method.

(a) The Net Tangible Asset (NTA) Method

The NTA method is perhaps the oldest method applied in the valuation of shares or businesses. It has its roots in the days when goodwill and intellectual property were not a significant feature of businesses.

Under this method, the value of a share is equal to the net tangible asset attributable to a particular class of shares divided by the number of shares in that class. Goodwill and identifiable intangible assets would be excluded in the calculation of the NTA per share. If the entity being valued has equity components attributable to parties other than the owners, such as preference shares that are equity and equity component of compound financial instruments or share options, these must be deducted in arriving at the net tangible asset attributable to owners.

The complexity in an asset valuation method is not the mathematics involved but is the process of establishing the fair values of the assets and liabilities to be used in the calculation, which are often not the same as the values recorded in the accounts of the entity being valued. Thus, separate valuation may need to be performed for those assets and liabilities in the statement of financial position that are not measured on the fair value basis. For example, properties of the entity being value may be carried at depreciated cost model and debt instruments may be measured at the amortised cost model. In an asset valuation method, these must be measured at their fair values for the purpose of the share or business valuation.

The factors or questions that need to be considered in the valuation process include (not an exhaustive list) the following:

- Are there significant tangible long-term assets, such as property, plant and equipment and investment property that may need a separate valuation? If there are, are there comparable market prices or recent transacted prices or do they need a professional valuation, and if so how much would it cost?
- Have the liabilities been accurately accounted for and quantified? Are there any contingent liabilities, such as lawsuits and third party claims, not yet recognised?
- Are the receivables properly accounted for their collectibility and is additional impairment loss required?
- Are inventories properly accounted for and is additional write-down required?
- In a transaction that involves acquisition of business, are there any liabilities that may arise from redundancy payments and closure of segments?
- Are the deferred tax assets and liabilities properly accounted for, including deferred taxes on the fair value adjustments to carrying amounts of assets and liabilities, and recognition of identifiable intangible assets?
- Are there any prior charges to the assets that may restrict the use of those assets?

Example 2

The consolidated statement of financial position of Entity P as at 31 December 20x5 is as follows:

	RM'000
Property, plant and equipment	200,000
Investment property	80,000
Investment in an associate	60,000
Goodwill on business combinations	110,000
Identifiable intangible assets	90,000
Current assets:	
Inventories	85,000
Trade and other receivables	75,000
Cash and cash equivalents	50,000
Total Assets	<u>750,000</u>

(b) Maximum Price to P Bhd

Year	Increased Cash Flows	Capital Expenditure	Net Cash Flows	Discount Factor at 13.5%	Present Value
			RM'000		RM'000
1	2,307	(1,000)	1,307	0.8811	1,152
2	2,557	(500)	2,057	0.7763	1,597
3	2,883		2,883	0.6839	1,972
4	3,146		3,146	0.6026	1,895
5	3,210		3,210	0.5309	1,704
6 onward			3,403		8,320
R - g			7.50%		
Yr 5 value			45,367	0.5309	24,086
Total PV					32,407
No of shares ('000)					10,000
Fair value per share (RM)					3.24

The maximum price of RM3.24 is the price that would result in break-even to P Bhd in the NPV of the investment. In practice, P Bhd may offer a price which is in between the two values. If P Bhd pays RM3.24 per share of Q Sdn Bhd, the control premium paid is RM0.76 per share.

The DCF method is suitable for share and business valuation only if estimates of cash flows are reasonable and reliable. This may be the case if the valuation is for the purpose of a controlling or strategic stake (such as for investments in subsidiaries, joint ventures and associates). The budgets and forecasts prepared by management can be checked and verified for reasonableness in assumptions or inputs used in the projections. However, when only small parcels of shares are involved (such as a simple investment of unquoted shares), an investor would not normally have access to internal budgets and forecasts of management. In such later cases, the valuation of shares using the DCF method can be highly subjective.

6.3.5 A Comprehensive Case on Share and Business Valuation

W Bhd is an investor in X Sdn Bhd holding 5% or 5 million ordinary shares in the latter. X Sdn Bhd is in the business of IT and Software developments and sales. It has a wide customer base, selling its software products to listed and unlisted entities. Its business has been doing well and sales and profits have been increasing steadily in the past five years.

The financial statements of X Sdn Bhd for the prior financial year ended 31 December 20x5 are as follows:

Statement of Financial Position

As at 31 December 20x5

Property, plant and equipment	RM'000
IT and software development expenditure	100,000
	180,000

Current assets:	RM'000
Software inventories and sundry supplies	30,000
Trade and other receivables	50,000
Cash and cash equivalents	40,000
Total assets	400,000
Contributed capital (100 million ordinary shares)	150,000
Retained profits	80,000
Preference shares	50,000
Total equity	280,000
Long-term loans	60,000
Current liabilities	60,000
Total equity and liabilities	400,000

The property, plant and equipment includes a leasehold property carried at the depreciated cost model RM60 million. The current market value of the property at 31 December 20x5, based on a recent transacted price of a similar property is RM100 million.

The summarised statements of profit or loss for the past five years are as follows:

Year	20x1	20x2	20x3	20x4	20x5
	RM'000	RM'000	RM'000	RM'000	RM'000
Revenue	400,000	416,000	424,320	458,266	481,179
Operating expenses	(280,000)	(294,000)	(308,700)	(324,135)	(340,342)
Profit from operations	120,000	122,000	115,620	134,131	140,837
Interest cost	(8,000)	(7,000)	(6,000)	(5,000)	(4,800)
Profit before tax	112,000	115,000	109,620	129,131	136,037
Tax expense	(26,880)	(27,600)	(26,309)	(30,991)	(32,649)
Profit after tax	138,880	142,600	135,929	160,122	168,686
Preference dividend	(5,000)	(5,000)	(5,000)	(5,000)	(5,000)
Profit attributable to owners	133,880	137,600	130,929	155,122	163,686
Earnings per share (RM)	1.34	1.38	1.31	1.55	1.64
Dividend per share (RM)	0.40	0.40	0.50	0.50	0.50

Notes to the financial statements reveal the following information:

Year	20x1	20x2	20x3	20x4	20x5
	RM'000	RM'000	RM'000	RM'000	RM'000
The expenses include:					
Depreciation of PPE	8,000	8,500	9,000	9,500	10,000
Amortisation of intangible assets	10,000	11,000	13,000	14,000	16,000
Other published information:					
Increase in working capital	5,000	5,500	6,000	7,000	8,000
Capital expenditure	15,000	15,000	20,000	20,000	25,000
Development expenditure	15,000	20,000	25,000	30,000	35,000

The additional information gathered from the market is as follows:

1. Comparable listed entities in the IT and software business have an average price-earnings ratio of 12 times (equivalent to an earnings yield of 8.333%). Professional valuers in the market generally apply a 1/3rd discount for risks and lack of liquidity of unquoted shares.
2. The Malaysian economy is expected to grow at 4% per year in the next five years. The general inflation is expected at 3% per year in the next five years.
3. The IT and software business is expected to remain competitive and industry outlook is a 6% growth in this sector.
4. Market participants view fair rate of return on operating assets at 15%, surplus funds in working capital provide fixed deposit returns of 3%, and fair rate of return on intangible assets and goodwill of 20%.

W Bhd expects that the business of X Sdn Bhd would continue to be better, earnings are expected to grow at its past growth rate and dividend will remain constant. Income tax rate is 25%. X Sdn Bhd has significant intellectual property in its IT and software developments. However, the intellectual property has not been valued independently. The amount of development expenditure capitalised is carried at the amortised cost model. Completed product development expenditure is being amortised on the straight line method over 5 years.

Required

Explain the suitable techniques that may be used to estimate the fair value of the ordinary shares of X Sdn Bhd as at 31 December 20x5. Show the detailed calculations required in each technique chosen.

Solution to the Case

X Sdn Bhd is in the IT and software business. It has significant intellectual property, the value of which may not have been reflected in the capitalised development expenditure. It has a wide customer base and its past earnings have been very high. Thus, the NTA method would not be a suitable method to estimate the fair value of its shares. The dividend payment is constant in the past three years and is not in tandem with the growth in earnings. The dividend methods would also not be suitable in the valuation of the shares of X Sdn Bhd.

The methods that should be used in this case are: (a) the NAV method; (b) the P/E ratio method and (c) the DCF method.

(a) The NAV method

Since the intellectual property could not be measured reliably without undue cost to W Bhd, its value should be subsumed within the inherent goodwill calculation. The past equity earnings of X Sdn Bhd have a compounded growth rate of $= 133,800 (1 + g)^4 = 163,686$, where g is 5.15%. The expected maintainable earnings are estimated at $= 163,686 (1.015) = RM172.122$ million. The fair returns on the net assets employed (without the goodwill) are RM47.500 million. The residual or excess profit is RM126.622 million. This excess profit is capitalised 5 times to determine the value of goodwill and intellectual property subsumed within. The calculation is as follows:

Calculation of NAV per share	RM'000	Rate of return %	Earnings RM'000
Property, plant & equipment	100,000		
Fair value adjustment	40,000		
Deferred tax liability	(10,000)		
	<u>130,000</u>	15%	19,500

Calculation of NAV per share	RM'000	Rate of return %	Earnings RM'000
Current assets	120,000		
Current liabilities	(60,000)		
Net working capital	60,000	3%	1,800
Development expenditure	180,000	20%	36,000
Long-term loans	(60,000)	8%	(4,800)
Preference shares	(50,000)	10%	(5,000)
Net assets attributable to owners	260,000		
Return on net assets employed			47,500
Expected maintainable earnings			<u>172,122</u>
Goodwill capitalised at 5 years	623,109	5x	<u>124,622</u>
Total net assets value	883,109		
No of shares ('000)	100,000		
NAV per share (RM)	8.83		

(b) The P/E ratio method

The growth rate in EPS in the past five years is also 5.15% i.e. calculated at $1.34 (1 + g)^4 = 1.64$, where g is 5.15%. The expected EPS is calculated at $1.64 (1.015) = RM1.72$. Using the average P/E ratio of comparable listed entities in the IT and software sector, and adjusting for risks and lack of liquidity factor of 1/3rd, the value per share is determined as follows:

$$\text{Value per share} = RM1.72 \times 12 \times 2/3 = RM13.77.$$

(c) The DCF method

Analysing the past free cash flows attributable to owners:

Past free cash flows:					
Year	20x1 RM'000	20x2 RM'000	20x3 RM'000	20x4 RM'000	20x5 RM'000
Profit attributable to owners	133,880	137,600	130,929	155,122	163,686
Add: Non-cash expenses					
Depreciation of PPE	8,000	8,500	9,000	9,500	10,000
Amortisation of intangible assets	10,000	11,000	13,000	14,000	16,000
Less: expenditures					
Increase in working capital	(5,000)	(5,500)	(6,000)	(7,000)	(8,000)
Capital expenditure	(15,000)	(15,000)	(20,000)	(20,000)	(25,000)
Development expenditure	(15,000)	(20,000)	(25,000)	(30,000)	(35,000)
Free cash flows to owners	<u>116,880</u>	<u>116,600</u>	<u>101,929</u>	<u>121,622</u>	<u>121,686</u>

The growth rate of the past free cash flows $= 116,880,000 (1 + g)^4 = 121,686,000$, where g is 1.01%. Assuming that the free cash flows would increase at the rate of 1.01% per year, the estimated free cash flows for the year 20x6 $= 121,686,000 (1.01) = RM122, 918,000$. The earnings yield of comparable quoted companies is 8.333%. Adjusting for risks and lack of liquidity of unquoted shares, the adjusted earnings yield for this valuation is $= 8.333\% / (1 - 1/3) = 12.5\%$.

Applying the Gordon's growth model of $D1 / (k_e - g)$, the total present value is computed as follows:

Total present value = $122,918,000 / (12.5\% - 1.01\%) = \text{RM}1,069,783,450$. Dividing by the 100 million shares in issue, the value per share is $\text{RM}10.70$.

The range of fair value is between the NAV value of $\text{RM}8.83$ and the P/E ratio valuation of $\text{RM}13.77$. It may be concluded that the fair value is in the mid-range value of $\text{RM}11.30$ per share. Conclusion based on the DCF valuation of $\text{RM}10.70$ per share is also supportable in this case.

6.3.6 Valuation of Entities with Potential Ordinary Shares

The two measures that are commonly used in share or business valuations are net asset value and earnings per share. In valuing an entity that has potential ordinary shares, such as convertible securities and options or warrants, the potential effects of the conversion of convertible securities and exercise of options should be considered and adjusted for in the measurement of the net asset value attributable to equity holders or the earnings attributable to equity holders.

Adjustments are made in the measurement only if the potential ordinary shares have a dilutive effect on the net asset value or the earnings attributable to equity holders. In a fair value measurement, market participants would have factored in potential ordinary shares that have dilutive effects. Those that are anti-dilutive shall be ignored because holders of such dilutive instruments would not exercise if the instruments are out-of-the-money (for example, when the exercise price of an option is higher than its fair value).

The adjustments to the net asset value attributable to equity holders include fair value adjustments of assets and liabilities carried at cost or amortised cost model, net of tax effects, if applicable. Also, the calculation of the adjusted earnings per share, for the purpose of the share or business valuation, is not the same as the calculation of the diluted EPS in MFRS 133 because equity earnings are not adjusted in MFRS 133 (except for convertible securities) and options are treated as dilutive only if the fair value exceeds the exercise price (the fair value is the subject of the valuation). Adjustments for interest or other savings (e.g. employee benefit expense) on assumed conversion of convertibles or exercise of options should be net of tax effects, except for employee share option expense, which is not a deductible tax expense in Malaysia.

Example 8

MK Bhd is planning to buy a controlling stake in the equity capital of Sawat Sdn Bhd, a company involved in the cultivation of oil palm and processing of crude palm oil and palm kernel. The parties involved have agreed that the valuation date would be on 30 June 20x9. As at the end of the prior year 31 December 20x8, the capital structure of Sawat Sdn Bhd consisted of the following components:

	RM'000
Contributed share capital (50 million ordinary shares)	100,000
Retained profits	80,533
Convertible securities — equity component	8,067
Share options granted to employees	16,000
Total equity	204,600
Non-Current Liabilities:	
Convertible securities — liability component	35,140
Deferred tax liabilities	8,460
Term loans	50,000
Total non-current liabilities	93,600
Total capital employed	298,200

Additional information

- On 31 December 20x5, Sawat Sdn Bhd issued 40 million convertible bonds at an issue price of $\text{RM}1$ per unit. The bonds carry a coupon interest rate of 3% per annum and are convertible into ordinary shares at any time after issue at a conversion price of $\text{RM}2$ per ordinary shares. Bonds not converted by the end of the five-year term would be redeemable at the nominal value of $\text{RM}1$ per unit. As at the date of issue of bonds, the prevailing market interest rate of similar risk-class bonds was 6%. Income tax rate is 24% throughout the period. To-date, none of the bonds has been converted.
- Twenty million share options were granted to employees on 31 December 20x4. The fair value of the option determined on that date was $\text{RM}1.00$. The exercise price is $\text{RM}1.50$ per share. The options vest over the five-year vesting period that is based only on service condition. The amount recognised an employee benefit expense for each year is $\text{RM}4,000,000$. To-date, none of the options has been exercised.
- As at 31 December 20x8, the deferred tax liability attributable to the convertible bonds is $\text{RM}1,166,000$.
- The plantation land is a leasehold land carried at cost less accumulated depreciation. Similarly, the oil palm crop is classified as a bearer plant and carried at cost less accumulated depreciation. As at 30 June 20x9, the carrying amounts of these two PPE and the fair values are determined as follows:

	Carrying Amount RM'000	Fair Value RM'000
Leasehold land (remaining life 80 years)	40,000	60,000
Bearer plants (remaining life of 20 years)	25,000	35,000

The profits attributable to owners for the past five years are as follows:

Year ended	RM'000
31 December 20x4	30,000
31 December 20x5	26,000
31 December 20x6	23,000
31 December 20x7	31,000
31 December 20x8	36,000

For the current year ending 31 December 20x9, the equity earnings are expected to increase by 10% over the preceding year due to forecast increase in CPO and palm kernel prices and increase in the hectares of mature oil palm crop.

As at 30 June 20x9, three comparable listed plantation companies have an average market price-to-nav ratio of 2.5 times and a price-earnings ratio of 15 times. Valuers in the plantation sector generally factor in a discount of 1/3rd for market risks and lack of liquidity of unquoted shares when valuing similar but unquoted plantation companies.

Required:

Compute the fair value per share of Sawat Sdn Bhd as at 30 June 20x9.

Solution 8

The fair value of the ordinary shares of Sawat Sdn Bhd may be measured using the market-to-Nav ratio method (a market approach) and the price-earnings ratio method (earnings approach).

- Market-to-NAV Valuation:

	RM'000
Book value of owners' equity (100,000 + 80,533)	180,533
Adjustments for fair value of assets, net of deferred tax:	
Leasehold lands (20,000 × 0.76)	15,200
Bearer plants (10,000 × 0.76)	7,400

12.2.6 Amendment (2017) to MFRS 12

When an entity's interest in a subsidiary, a joint venture or an associate (or a portion of its interest in a joint venture or an associate) is classified (or included in a disposal group that is classified) as held for sale in accordance with MFRS 5 *Non-current Assets Held for Sale and Discontinued Operations*, the entity is not required to disclose summarised financial information for that subsidiary, joint venture or associate in accordance with paragraphs B10–B16 [MFRS 12.B17].

CHAPTER 13

THE EFFECTS OF CHANGES IN FOREIGN EXCHANGE RATES

This Chapter will help you in the following areas:

- to understand the nature and types of foreign currency operations;
- to understand the concepts of the function currency and the presentation currency;
- to be able to deal with the measurement of foreign currency transactions;
- to understand how exchange gains and losses arise and the accounting treatments for such gains and losses; and
- to understand and be able to apply the translation method for consolidating the financial statements of foreign operations.

13.1 Foreign Currency Transactions and Operations

As the Malaysian economy grows, it is inevitable that more and more companies will enter into international trade and undertake operations in foreign countries. Most of these transactions or undertakings will be denominated in foreign currencies, and thus, the need to understand translation and foreign currency exposure arises. In this chapter we shall focus our attention on accounting for these foreign currency transactions and operations, and the related topic of hedging currency exchange exposure.

The ways in which a Malaysian company can enter into foreign currency transactions and operations can be summarised into two categories, as follows:

- (a) *Foreign currency transactions*. In this case, the local entity enters into direct business transactions with other entities and the transactions are denominated in foreign currencies. Examples of such transactions would include:
 - (i) short-term transactions, such as purchases of raw materials and other assets or sales of goods for which payments are made or receipts are in foreign currencies; and
 - (ii) long-term transactions, such as lending or borrowings in foreign currencies, and purchases of equity investments in foreign-based corporations.
- (b) *Foreign currency operations*. In this case, the local entity conducts its foreign currency operations by setting up or investing in branches, subsidiaries, joint ventures and associates, whose activities are based or conducted in foreign currencies. In such operations, it is usual for the accounting records and financial statements to be in their respective local currencies.

At the outset, it is important that the term “exchange exposure” be understood because all Malaysian firms that enter into foreign currency transactions and operations are subject to it. This exposure is the risk of exchange losses or gains from foreign currency transactions and operations arising as a result of fluctuations of the exchange rates of foreign currencies against the Malaysian Ringgit. The fluctuations are dependent mainly on the Malaysian economy in general, and its foreign trade in particular, both of which dictate the strength of the Ringgit relative to the foreign currencies. It is the appreciation or depreciation of the Ringgit that gives rise to exchange differences in foreign currency operations.

If a Malaysian entity holds an asset denominated in a foreign currency (such as a foreign cash or a foreign trade receivable arising from sales) and that foreign currency appreciates against the Ringgit, there will be an exchange gain accruing to the entity simply because that foreign asset now commands more Ringgit equivalent. If that foreign currency depreciates against the Ringgit, an exchange loss will arise, because the foreign asset now commands less Ringgit equivalent.

Conversely, if an entity has a liability denominated in a foreign currency (such as foreign trade payable arising from purchases or a foreign currency loan) and that foreign currency appreciates against the Ringgit, an exchange loss will accrue to the firm, because the liability has increased in Ringgit equivalent. If that foreign currency depreciates against the Ringgit, an exchange gain will arise as the liability now carries lower Ringgit equivalent.

The table below provides a convenient way for visualising exchange exposure.

Table 13.1: Exchange Exposure

ITEMS	IF FOREIGN CURRENCY:	
	APPRECIATES	DEPRECIATES
Foreign Assets	GAIN	LOSS
Foreign Liabilities	LOSS	GAIN

For the purpose of including the foreign currency transactions and operations in the accounting records and/or financial statements of the local reporting entity, there is a need to translate the direct foreign currency transactions and the financial statements of the foreign operations into the Ringgit presentation currency. Translation is basically the process of expressing the financial data denominated in one currency into the equivalent financial data in another currency. For local entities, the process will be to express financial data of foreign currency transactions and operations into their Ringgit equivalents.

When foreign exchange rates fluctuate over time, two main issues arise in relation to the translation of foreign currency transactions and operations, as follows:

- what rate or rates of exchange should be used to translate the direct foreign currency transactions and the financial statements of the foreign operations; and
- what should be the appropriate accounting treatment or treatments to be accorded to the exchange differences arising from the translation?

In the discussions that follow in the next two sections, we will first look at accounting for direct foreign currency transactions and then turn our attention to the translation of financial statements of foreign operations for the purpose of preparing the local parent’s consolidated financial statements. The requirements in Section 30 *Foreign Currency Translation* of MPERS are substantially similar to those in MFRS 121 *The Effects of Changes in Foreign Exchange Rates*, except for the treatment of the foreign exchange translation differences on disposal of a foreign operation.

13.2 Functional Currency and Presentation Currency

In recent years, many Malaysian companies have ventured into foreign currency operations either by setting up or acquiring foreign subsidiaries and/or by conducting their transactions and other operations in currencies other than the Malaysian Ringgit. Globalisation has, to a great extent, rendered irrelevant the location or country in which an entity operates. For example, a Malaysian company may set up a subsidiary in China but chooses to conduct its business in the US dollar. In this case, although located in China, the subsidiary operates in the US dollar environment. Any transaction denominated in a currency other than the US dollar, including the local currency of the Chinese Yuan, is a foreign currency transaction to the subsidiary. Similarly, a Malaysian company set up in Labuan may choose to conduct its operations in Singapore dollar, and thus operates in the Singapore dollar environment. A transaction denominated in Malaysian Ringgit, such as taking a Malaysian Ringgit loan, would be a foreign currency transaction to this Malaysian company.

MFRS 121 *The Effects of Changes in Foreign Exchange Rates* replaces the concept of “reporting currency” used in the original IAS 21 with two new concepts, as follows:

- Functional currency — which is the currency of the primary economic environment in which the entity operates; and
- Presentation currency — which is the currency in which the financial statements are presented.

With these two new concepts, foreign currency is now defined as a currency other than the functional currency of the entity [the original Standard defined foreign currency as a currency other than the reporting currency of an entity]. The term “local currency” is therefore redundant in this revised Standard. For example, if a Malaysian firm has determined that the US dollar is its functional currency, the local currency of Ringgit would just be one of the firm’s foreign currencies.

This revised Standard requires each individual entity, whether it is a stand-alone entity (such as a single company), an entity with foreign operations (such as a parent) or a foreign operation (such as a branch or a subsidiary), shall determine its functional currency and measure its results and financial position in that currency. Each entity shall therefore translate foreign currency transactions and items into its functional currency and reports the effects of such transactions in accordance the principles prescribed for foreign currency transactions.

For example, assume that PQR Bhd operates predominantly in Malaysia and its business transactions are denominated mainly in the Ringgit. In this case, PQR Bhd’s functional currency is the Ringgit, it would measure its results (comprehensive income and cash flows) and financial position in the Ringgit, and it would treat the US dollar (and any other currency) as a foreign currency. However, if PQR Bhd’s business transactions are denominated mainly in the US dollar, its functional currency is the US dollar, which should be used to measure its results and financial position. In this latter case, the Ringgit (and any other currency) is a foreign currency of that company. Accordingly, any changes in the Ringgit exchange rate of a Ringgit denominated transaction would be measured and dealt with in its US dollar functional currency accounts.

Similarly, a Malaysian subsidiary that operates in Hong Kong would identify the US dollar as its functional currency if that is the primary economic environment in which it operates. That subsidiary should measure its results and financial position in the US dollar. To that subsidiary, both the HK dollar and the Ringgit, or any other currency, would be its foreign currencies. If the Hong Kong subsidiary’s accounts are also kept in the US dollar functional currency, any changes in foreign currency exchange rates (including HK dollar and Ringgit) would be dealt with (for example, measured and recognised as gain or loss) in its US dollar accounts. For consolidation purposes, the subsidiary’s US dollar accounts should be translated to Malaysian Ringgit before they are included the Malaysian parent’s group accounts (where the parent’s presentation currency is

the Ringgit). In this case, the recognition and measurement issues relating to foreign currency transactions are dealt with in the subsidiary's US dollar functional currency accounts, whilst the issues of translation to Ringgit for consolidation purposes are dealt with in the parent's presentation currency group accounts.

13.2.1 The Functional Currency

In determining the functional currency of an entity, the primary economic environment in which it operates is normally the one in which its primarily generates and expends cash. Among the factors to consider in determining the functional currency of an entity are as follows:

- the currency: (i) that mainly influences sales prices for goods and services (for example, the currency in which sales prices for its goods and services are denominated and settled), and (ii) of the country whose competitive forces and regulations mainly determine the sales prices of its goods and services; and
- the currency that mainly influences labour, material and other costs of providing goods and services (for example, the currency in which such costs are denominated and settled).

Additional factors that may provide additional evidence of an entity's functional currency include:

- the currency in which funds from financing activities (i.e. issuing of debts and equity instruments) are generated; and
- the currency in which receipts from operating activities are usually retained (for example, currency or currencies of bank accounts).

A foreign operation of a Malaysian parent may choose to conduct its business in Malaysian Ringgit. In such cases, the foreign operation, though located in an overseas jurisdiction, is an integral part of or an extension of the operations of the Malaysian parent. The foreign operation would thus have the same functional currency as that of the Malaysian parent and there is no need to translate its financial statements for consolidation purposes. The following factors are considered in deciding whether the functional currency of a foreign operation is the same as that of the reporting entity:

- whether the activities of the foreign operation are carried out as an extension of the reporting entity, rather than being carried with a significant degree of autonomy. For example, if the foreign operation is set up purely to sell goods imported from the Malaysian parent and it immediately remits the proceeds to the parent, its operations are considered an integral part of the operations of the Malaysian parent. In this case, the foreign operation would have the same functional currency as that of the Malaysian parent. However, if the foreign operation conduct its business activities with a high degree of autonomy, such as when it accumulates its own cash and other monetary items, incur expenses, generate income and arrange borrowings, all substantially in its local currency, its operations are not considered an extension or an integral part of the Malaysian parent;
- whether transactions with the reporting entity are a high or low proportion of the foreign operation's activities. A high proportion of intragroup transactions with the Malaysian parent may indicate that the foreign operation is an integral operation;
- whether cash flows from the activities of the foreign operation directly affect the cash flows of the reporting entity and are readily available for remittance to it; and
- whether the cash flows from the activities of the foreign operation are sufficient to service existing and normally expected debt obligations without funds being made available by the reporting entity.

When the indicators are mixed and the functional currency is not obvious, management uses its judgement to determine the functional currency that most faithfully represents the economic effects of the underlying transactions, events and condition. For example, assume that a Malaysian reporting entity conducts its business activities in multiple currencies. In determining its functional currency, it shall give priority to the

primary indicators of sales and operating expenses, before considering the other indicators. Note that when a Malaysian entity has branches, whether locally or in overseas jurisdictions, each branch shall determine its functional currency and reports its results and financial position in that currency.

13.3 Reporting Foreign Currency Transactions in the Functional Currency

13.3.1 Initial Recognition

MFRS 121 requires that "a foreign currency transaction shall be recorded, on initial recognition in the functional currency, by applying to the foreign currency amount the spot exchange rate between the functional currency and the foreign currency at the date of the transaction" [MFRS 121.21]. In other words, at transaction date, each asset, liability, revenue or expense item arising from a transaction denominated in a foreign currency should be translated into the functional currency at the exchange rate ruling at the date of the transaction.

The rate ruling at the date of the transaction is known as the actual or spot rate for the foreign currency. If the number of such transactions is voluminous, it may be more practical to use a rate that approximates the actual rates, such as an average weekly spot rate to translate all foreign currency transactions for the week.

Example 1

On 30 September 20x2, Manja Berhad, whose functional currency is the Malaysian Ringgit, undertook the following foreign currency transactions:

- Sold goods on credit to a customer in United States for an invoice amount of US\$50,000;
- Purchased raw materials on credit from a supplier in Singapore for an invoice amount of S\$80,000; and
- Obtained a Japanese Yen long-term loan of Y100 million.

On that date, the exchange rates were quoted as follows:

	Selling	Buying
<i>Malaysian Ringgit per unit of foreign currency:</i>		
US dollar	4.4100	4.2820
Singapore dollar	3.0950	2.9980
<i>Malaysian Ringgit per 100 units of foreign currency:</i>		
Japanese yen	3.7120	3.5870

Required:

Show the journal entry to record each of the above foreign currency transactions.

Solution 1

Note that the difference between the quoted selling and buying rates of a foreign currency represents the ask-bid spread, which commercial banks quote when they offer to respectively sell or buy a foreign currency. From the entity's point of view, the banks' selling and buying rates will respectively be the entity's buying and selling rates. (Remember that banks buy "low" and sell "high" to earn the spread for the foreign exchange services they provide to their customers). Thus, the rate to be used by the entity will depend on whether it is in the "sell" position or a "buy" position. For example, in the case where the entity has a trade receivable arising from a sale of goods, it will be in the "sell" position, and accordingly, the bank's buying rate (i.e. the bid price) should be used. In the case where the entity is in the "buy" position, such as when it has a trade payable, the bank's selling rate (i.e. the ask price) should be used. MFRS

13 *Fair Value Measurement* clarifies that an entity may continue to apply the bid-ask price requirements of the previous MFRS 139, but it does not preclude the use of a mid-pricing (an average of the bid-ask prices) if that mid-pricing represents the price transacted between market participants.

Journal entries:

(i) Dr Foreign trade receivable account		RM214,100	
	Cr Sales account (US\$50,000 × 4.2820)		RM214,100
	– to record sale to a foreign customer.		
(ii) Dr Purchase account (S\$80,000 × 3.0950)		RM247,600	
	Cr Foreign trade payable account		RM247,600
	– to record purchase of goods from a foreign supplier.		
(iii) Dr Bank account (Yen 100 m × 3.7120 × 1/100)		RM3,712,000	
	Cr Foreign currency long-term loan		RM3,712,000
	– to record Yen loan obtained.		

13.3.2 Settlement of Transactions

In any reporting period, many foreign currency transactions may have been settled prior to or at the end of the reporting period. For example, some foreign trade debts would have been collected, foreign trade payables would have been paid, or a foreign currency loan, which matured in the period, would have been paid. These are termed as realised foreign currency transactions.

A *realised* exchange difference on a transaction arises when the exchange rate used at its settlement or realisation date (i.e. when the monetary item was paid or received) is different from the rate used when it was initially recorded during the period, or used in the previous period-end date. Generally, all exchange differences arising on settlement of monetary items should be recognised as gains or losses in profit or loss in the period in which they arise.

Example 2

Suppose, in the Example 1 above, the foreign trade receivable of US\$50,000 was collected on 30 November 20x2. The spot rate per unit of US\$ was RM4.1750, as sold to the bank on that day.

Required:

Show the journal entry to record the settled trade debt and to recognise the exchange difference.

Solution 2

The exchange difference in this case is calculated as follows:

Transaction date:		US\$	Rate	RM
30 Sept. 20x2	Sales	50,000	4.2820	214,100
30 Nov. 20x2	Settlement	50,000	4.1750	208,750
	Realised exchange loss to profit or loss			<u>5,350</u>

The journal entry to recognise this exchange loss is as follows:

Dr Bank account [US\$50,000 × 4.1750]		RM208,750	
Dr Exchange loss in profit or loss		RM5,350	
	Cr Foreign trade receivable account		RM214,100
	– to record settlement of trade debt and loss on exchange.		

13.3.3 Reporting at the Ends of Subsequent Reporting Periods

Some foreign currency transactions may remain unsettled at the end of a reporting period, such as when sales or purchases denominated in foreign currencies are transacted towards the financial year end, and the settlement will only be made after the end of that financial year, or when a long-term loan denominated in a foreign currency remains unsettled at the end of the financial year.

For the purpose of measurement at the end of the financial period, the assets and liabilities arising from foreign currency transactions should be identified into *monetary items* and *non-monetary items*. Monetary items are money held and assets and liabilities to be received or paid in fixed or determinable amounts of money. They are items of money or claims to money. By default, non-monetary items are items not expressed in money or claims to money.

MFRS 121 and MPERS both require that at the end of each reporting period, all monetary items, such as cash and bank accounts, receivables, payables, advances, lending and borrowings, denominated in foreign currencies should be translated using their respective closing rates (i.e. the rates ruling at the end of the reporting period) [see MFRS 121.23(a)]. These would give rise to *unrealised* exchange differences when the exchange rates used for translation at the end of the reporting period are different from the rates used when the transactions were initially recorded during the period or used at the end of the previous period.

For non-monetary items, such as property, plant and equipment, intangible assets, equity investments and inventories, which are carried at historical costs, the Standard prescribes that they should be reported using the exchange rates at the dates of the respective transactions (i.e. at their respective historical rates) [see MFRS 121.23(b)]. For non-monetary items, such as property and investments, which are carried at revalued amounts or at their fair values, they shall be reported at the exchange rates when the revalued amounts or fair values were determined [see MFRS 121.23(c)]. Thus, no exchange difference will arise on translation of non-monetary items.

13.3.4 Recognition of Exchange Differences

MFRS 121 and MPERS both require that “exchange differences arising on settlement of monetary items or on translating monetary items at rates different from those at which they were translated on initial recognition during the period or in a previous financial statements, shall be recognised in the profit and loss in the period in which they arise” (with limited exceptions) [see MFRS 121.28].

Example 3

Suppose in the Example 1 above, the foreign trade payable of S\$80,000 was not due for payment as at 31 December 20x2, the company’s date of statement of financial position. The bank’s selling spot rate per unit of S\$ on that date was RM3.0176.

Required:

Show the journal entry to recognise the resulting exchange difference arising on the re-translation. Also, state the carrying amount of the trade payable.

Solution 3

The exchange difference in this case is calculated as follows:

Transaction date:		US\$	Rate	RM
30 Sept 20x2	Purchases	80,000	3.0950	247,600
Balance sheet date:				
31 Dec. 20x2	Retranslation	80,000	3.0176	241,408
Unrealised exchange gain to profit or loss				6,192

The journal entry to recognise this exchange gain is as follows:

Dr Foreign trade payable account	RM6,192
Cr Exchange gain in profit or loss	RM6,192

– to retranslate foreign payable amount and recognise exchange gain.

The carrying amount of this trade payable at year-end = RM247,600 - RM6,192 = RM241,408, which should be equal to US\$80,000 × 3.0176.

Example 4

Suppose in the Example 1 above, the Japanese Yen loan was for a period of five-years. The bank's selling spot rate per 100 units of Japanese Yen at 31 December 20x2 was RM3.8048.

Required:

Show the journal entry to recognise the exchange difference arising on the re-translation of the Yen loan. Also, state the carrying amount of the loan at the date of the statement of financial position.

Solution 4

The exchange difference in this case is calculated as follows:

Transaction date:		Yen	Rate per 100	RM
30 Sept. 20x2	Loan obtained	100,000,000	3.7120	3,712,000
Balance sheet date:				
31 Dec. 20x2	Retranslation	100,000,000	3.8048	3,804,800
Unrealised exchange loss to profit or loss				92,800

The journal entry to recognise this exchange loss is as follows:

Dr Exchange loss in profit or loss	RM92,800
Cr Foreign currency long-term loan	RM92,800

– to recognise exchange loss in profit or loss on re-translation of loan.

At 31 December 20x2, the Yen loan amount, translated at the closing rate, is stated at RM3,804,800 [i.e. 3,712,000 + 92,800 or simply 100,000,000 × 3.8048 / 100].

13.3.5 Functional Currency that is not a Local Currency

If a Malaysian company has a functional currency other than the Malaysian Ringgit, the above translation and recognition principles shall be applied in that functional currency. For example, if the functional currency is the US dollar, then the results (statement of profit or loss and other comprehensive income or statement of profit or loss, if presented separately and cash flows) and statement of financial position shall be measured in the US dollar.

The accounting records should logically be kept in the US dollar. However, if the local laws and regulations require that the accounting records must be kept in the Malaysian Ringgit, then ideally, two sets of accounts must be maintained (i.e. a dual system of accounting), one set kept in the Malaysian Ringgit to comply with the local laws, and the other set kept in US dollar to comply with MFRS 121. The requirement to keep the accounting records in the Malaysian Ringgit was a requirement in the original *Companies Act 1965*. In the new *Companies Act 2016*, there is no prescribed requirement that the accounting records must be kept in the Malaysian Ringgit. Hence, a company incorporated in Malaysia may keep its accounting records in its functional currency to facilitate the preparation of its financial statements in that functional currency.

However, under Section 259(1)(c) of the new *Companies Act 2016*, a company shall lodge with the Registrar for each financial year the financial statements and reports required under this Act, all amounts shown in the financial statements and reports lodged with the Registrar shall be *quoted in Malaysian currency*. Hence, for presentation in Malaysia, the financial statements shall be presented in the Malaysian Ringgit.

Example 5

Ajex Bhd, a local firm with a US\$ functional currency, conducted the following transactions during the month of March 20x8:

- 1 March 20x8 — sold goods to a company in Australia for an invoice amount of US\$100,000. On this date, the spot exchange rate was RM4.5000 to US\$1.000.
- 15 March 20x8 — purchased raw materials for a company in Singapore for an invoice amount of S\$110,000. On this date the spot exchange rate was S\$1.4250 to US\$1.
- 20 March 20x8 — deposited RM2,000,000 in a fixed deposit with a Malaysian bank. On this date, the spot exchange rate was RM4.4500 to US\$1.

All the above transactions remained outstanding on 31 March 20x8. The spot exchange rates per US\$1 on this date were as follows:

- RM4.4000 per US\$;
- S\$1.4550 per US\$.

Required:

- Show the journal entries to record the above transactions in the accounts of Ajex Bhd; and
- Calculate the exchange difference and show the journal entries to recognise the gain or loss at the quarter end date.

Solution 5

- Journal entries on initial recognition:

01 March: Dr Trade receivables	US\$100,000
Cr Sales	US\$100,000

– to record sales in the functional currency.

Note: no translation is required for this transaction.

15 March: Dr Purchases account (S\$110,000 / 1.4250)		US\$77,193	
Cr Trade payables			US\$77,193
– to translate and record purchases.			
20 March: Dr Fixed deposit (RM2,000,000 / 4.4500)		US\$449,438	
Cr Bank account			US\$449,438
– to translate and record placement of deposit.			
(b) Reporting at Quarter End Date:			
(i) No change to the trade receivable recorded as this is not a foreign currency transaction.			
(ii) Trade payable is translated at closing rate i.e. S\$110,000 / 4.4550 = US\$75,601. The exchange gain is recorded as follows:			
Dr Trade payables (77,193 - 75,601)		US\$1,592	
Cr Exchange gain in profit or loss			US\$1,592
(iii) The Ringgit fixed deposit is translated at closing rate i.e. RM2,000,000 / 4.4000 = US\$454,545. The exchange gain is recorded as follows:			
Dr Fixed deposit (454,545 - 449,438)		US\$5,107	
Cr Exchange gain in profit or loss			US\$5,107

13.3.6 Net Investment in a Foreign Operation

MFRS 121 prescribes that “exchange differences arising on a monetary item that forms part of a reporting entity’s net investment in a foreign operation shall be recognised in profit or loss in the separate financial statements of the reporting entity or the individual financial statements of the foreign operation, as appropriate. In the financial statements that include the foreign operation and the reporting entity (e.g. consolidated financial statements when the foreign operation is a subsidiary), such exchange differences shall be recognised initially in other comprehensive income and reclassified from equity to profit or loss on disposal of the net investment)” [MFRS 121.32].

The long-term monetary items include loans and advance, long-term payables and receivables. If there is no intention of immediate settlement or realisation of these monetary items, then they are, in substance, part of the net investment in the foreign operation. They therefore do not include trade receivables and trade payables for which settlement is expected.

As translation of a foreign operation under the closing rate method (see the later section on translation of foreign operation) results in exchange differences being recognised initially in other comprehensive income and retained in a separate component of equity, exchange differences arising on translation of these long-term monetary items should similarly be recognised in other comprehensive income and retained in equity at the group level as they represent part and parcel of the net investment in the foreign operation. The exchange differences recognised initially in other comprehensive income shall be classified as a separate component (for example, as “exchange translation reserve”) in the statement of changes in equity.

Example 6

On 1 January 20x1, Halia Bhd, with a functional currency of the Malaysian Ringgit, established a wholly owned subsidiary, Ajex Ltd, in the Labuan, with a paid up capital of US\$2,000,000. Halia Bhd applied the cost model to account for investments in subsidiaries.

On the same day, Halia Bhd extended a long-term advance of US\$8,000,000 to Ajex Ltd. The advance was considered to be part of the net investment in Ajex Ltd as it was not intended for settlement in the foreseeable future. Ajex Ltd’s functional currency was the US dollar. Assume that for the year ended 31 December 20x1, it recorded exactly zero profit.

The exchange rates between Ringgit and US\$ were as follows:

01 January 20x1	RM3.5000 = US\$1
31 December 20x1	RM3.8000 = US\$1

Required:

Calculate and explain how the exchange differences should be dealt with in the separate financial statements of Halia Bhd and in its consolidated financial statements for the year ended 31 December 20x1.

Solution 6

In Halia Bhd’s separate financial statements, the investment, being a non-monetary item, would be carried at its cost of RM7,000,000 (i.e. translated at the historical rate of RM3.5000). No exchange difference would arise from this translation.

However, the advance made to Ajex Ltd is a monetary item, which should be translated and carried at the closing rate amount of RM30,400,000. The exchange gain arising is RM2,400,000 [i.e. US\$8,000,000 × (3.80 - 3.50)], which shall be recognised as a gain in profit or loss. In the individual accounts of Ajex Ltd, the US dollar advance from its parent is not a foreign currency transaction, and accordingly, no exchange difference would arise.

At Halia’s group level, translation of the net assets (assets and liabilities) of Ajex Ltd under the closing rate method would produce an exchange gain of RM600,000, that shall be recognised in other comprehensive income and retained as a separate component in equity (e.g. exchange translation reserve). Consolidating the exchange gain of the parent’s account, the total exchange gain recognised in other comprehensive income and retained in exchange translation reserve in the consolidated financial statements would be RM3,000,000. This can be reconciled to the exchange difference on the total net investment, as follows:

$$[\text{US}\$2,000,000 + \text{US}\$8,000,000] \times [3.80 - 3.50] = \text{RM}3,000,000$$

In the Example 6 above, the advance extended is denominated in the functional currency of the foreign operation, and thus, the exchange gain arises in the parent’s separate financial statements, which shall be reclassified from profit or loss and recognised in other comprehensive income in the parent’s consolidated financial statements.

Similarly, when a monetary item forms part of a reporting entity’s net investment in a foreign operation and is denominated in the functional currency of the reporting entity, an exchange difference arises in the foreign operation’s individual financial statements. The exchange gain or loss recognised in profit or loss in the foreign operation’s individual financial statements shall also be reclassified from profit or loss and recognised in other comprehensive income in the parent’s consolidated financial statements.

Example 7

Suppose in the Example 6 above, the long-term advance was denominated in the Malaysian Ringgit in the amount of RM28,000,000.

Required:

Calculate and explain how the exchange differences should be dealt with in the individual financial statements of Apex Ltd and in the consolidated financial statements of Halia Bhd.

Solution 7

In Apex Ltd's individual financial statements, the translation to its functional currency would be as follows:

	RM	Rate	US\$
01 Jan. 20x7: Advance obtained	28,000,000		
31 Dec. 20x7 Translation at year end	28,000,000	3.5	8,000,000
Gain on translation at year end		3.8	7,368,421
			<u>631,579</u>

In Apex Ltd's functional currency accounts, the exchange difference of US\$631,579 shall be recognised as a gain in its profit or loss. However, at Halia Bhd's group level, this gain shall be reclassified and recognised in other comprehensive income (and retained in exchange translation reserve). The total exchange reserve, in this case, would still be the same as in Example 10.6 i.e. at RM3,000,000 (US\$631,579 × 3.8 + RM600,000). Note that in this case, the net assets of Apex Ltd would increase to US\$2,631,579. Thus, the gain recognised in other comprehensive income and deferred in exchange translation reserve can also be proved as follows:

	US\$	Rate	RM
31 Dec. 20x7: Net assets (2,000,000 + 631,579)	2,631,579		
01 Jan. 20x7: Opening net assets	2,000,000	3.8	10,000,000
Group's gain recognised in other comprehensive income		3.5	7,000,000
			<u>3,000,000</u>

MFRS 121 further clarifies that a monetary item that forms part of the parent's net investment in a foreign operation may be denominated in a currency other than the functional currency of the parent or the foreign operation. In this case, exchange differences arise both in the parent's separate financial statements and in the foreign operation's individual financial statements. Such exchange differences are also reclassified from profit or loss and recognised in other comprehensive income in the consolidated financial statements of the parent.

Example 8

On 1 January 20x8, Mulia Bhd, whose functional currency was the Malaysian Ringgit, extended a loan of US\$1,000,000 to its subsidiary, Siam Ltd. The loan was part of the net investment in Siam Ltd. Siam Ltd operated mainly in Thailand and its functional currency was the Thai Bahts.

The exchange rate movements were as follows:

1 January 20x8: US\$1.00 = RM4.00 = Bahts40.00

31 December 20x8: US\$1.00 = RM3.50 = Bahts42.50

Required:

Calculate and explain how the exchange differences arising on the above loan should be dealt with in the accounts of the Mulia Bhd, Siam Ltd, and in the consolidated accounts of Mulia Bhd.

Solution 8

In the separate accounts of Mulia Bhd:

	US\$	Rate	RM
01 Jan. 20x8: Loan to subsidiary	1,000,000	4.00	4,000,000
31 Dec. 20x8: Translation at year end	1,000,000	3.50	3,500,000
Exchange loss recognised in profit or loss			<u>(500,000)</u>

In the individual accounts of Siam Ltd

	US\$	Rate	Bahts
01 Jan. 20x8: Loan from parent	1,000,000	40.00	40,000,000
31 Dec. 20x8: Translation a year end	1,000,000	42.50	42,500,000
Exchange loss recognised in profit or loss			<u>(2,500,000)</u>

In the consolidated financial statements of Mulia:

	Exchange Reserve
	RM
Parent's loss reclassified and recognised in OCI	(500,000)
Subsidiary's loss reclassified and recognised in OCI	
(2,500,000 × 3.50 / 42.50)	<u>(205,882)</u>
Total exchange loss recognised in OCI	<u>(705,882)</u>

13.3.7 IC Int. 22 Foreign Currency Transactions and Advance Consideration

This Interpretation addresses the date of the transaction for determining the exchange rate to use in reporting foreign currency transactions that involve advance consideration paid or received. MFRS 121 specifies the exchange rate(s) to use on initial recognition of a foreign currency transaction in an entity's functional currency. MFRS 121 does not, however, address how to determine the exchange rate for the recognition of revenue when an entity has received advance consideration in a foreign currency.

When an entity pays or receives consideration in advance in a foreign currency, it generally recognises a non-monetary asset or non-monetary liability before the recognition of the related asset, expense or income. The related asset, expense or income (or part of it) is the amount recognised applying relevant Standards, which results in the derecognition of the non-monetary asset or non-monetary liability arising from the advance consideration.

The Interpretation applies to a foreign currency transaction (or part of it) when an entity recognises a non-monetary asset or non-monetary liability arising from the payment or receipt of advance consideration before the entity recognises the related asset, expense or income (or part of it). It addresses how to determine the date of the transaction for the purpose of determining the exchange rate to use on initial recognition of the related asset, expense or income (or part of it) on the derecognition of a non-monetary asset or non-monetary liability arising from the payment or receipt of advance consideration in a foreign currency.

Consensus

Applying paragraphs 21–22 of MFRS 121, the date of the transaction for the purpose of determining the exchange rate to use on initial recognition of the related asset, expense or income (or part of it) is the date on which an entity initially recognises the non-monetary asset or non-monetary liability arising from the payment or receipt of advance consideration.

If there are multiple payments or receipts in advance, the entity shall determine a date of the transaction for each payment or receipt of advance consideration.

Example 9

On 1 January 20x8, Entity K, which has a functional currency of RM, undertakes the following foreign currency transactions:

- (i) received USD1,000,000 in advance of goods to be delivered to a customer in US on 31 March 20x8; and
- (ii) pay in advance £1,000,000 for purchase of a machine to be delivered by the manufacturer in UK on 30 April 20x8.

The relevant exchange rates are as follows:

Date	RM per unit of FC		
	1 Jan 20x8	31 Mar 20x8	30 Apr 20x8
USD	4.2300		
£	5.4500	4.440	5.6500

On 1 January 20x8, Entity K shall record the following non-monetary foreign currency transactions:

	RM	RM
Dr Bank (USD 1,000,000 × 4.2300)		
Cr Advance received	4,230,000	
– to record advance received from customer.		4,230,000
Dr Advance paid (£1,000,000 × 5.4500)		
Cr Bank account	5,450,000	
– to record advance paid to manufacturer.		5,450,000

On 31 March 20x8, when the sales to the US customer are made, the journal entry would be as follows:

	RM	RM
Dr Advance received (derecognised)		
Dr Exchange loss in profit or loss	4,230,000	
Cr Sales at spot rate (1,000,000 × 4.4400)	210,000	
– to recognise sales and exchange loss.		4,440,000

On 30 April 20x8, when the machine is delivered to Entity K, the journal entry would be as follows:

	RM	RM
Dr Machine at spot rate (£1,000,000 × 5.6500)		
Cr Advance paid (derecognised)	5,650,000	
Cr Exchange gain in profit or loss		5,450,000
– to record purchase of machine and exchange gain.		200,000

13.3.8 Other Requirements**13.3.8.1 Revaluation of Non-Monetary Assets**

Non-monetary items, such as inventories, equity investments, and property, plant and equipment, carried in terms of historical cost denominated in a foreign currency should be reported using the exchange rate at the date of the transaction [i.e. their respective historical rates].

However, some non-monetary items may be carried at fair value denominated in a foreign currency or may have been revalued in their foreign currency amounts. MFRS 121 prescribes that “when a gain or loss on a non-monetary item is recognised directly in other comprehensive income, any exchange component of that gain or loss shall be recognised directly in other comprehensive income. Conversely, when a gain or loss on a non-monetary is recognised in profit or loss, any exchange component of that gain or loss shall be recognised in profit or loss” [MFRS 121.30].

For example, if a property denominated in a foreign currency has been revalued, the gain arising shall be credited directly in other comprehensive income (and retained in a revaluation reserve). In this case, the exchange rate to be used to translate the property should be the rate ruling at the date of the valuation. Any exchange component of that gain is also included in other comprehensive income and forms part of the revaluation reserve.

13.3.8.2 Impairment of Non-Monetary Assets

Non-monetary assets denominated in foreign currency are subject to the normal impairment test, such as inventories are measured at lower of cost and net realisable value, whilst property carried on the cost model shall be tested for impairment losses by comparing with its recoverable amount. When these are measured in a foreign currency, the Standard requires that the carrying amount is determined by comparing:

- (a) the cost or carrying amount, as appropriate, translated at the exchange rate at the date when that amount was determined (i.e. the rate at the date of the transaction for an item measured in terms of historical cost); and
- (b) the net realisable value or recoverable amount, as appropriate, translated at the exchange rate at the date when that value was determined (e.g. closing rate at the date of the statement of financial position).

The effect of this comparison may be that the impairment loss recognised in the foreign currency may be reversed in the functional currency, or vice versa (i.e. no impairment loss required in foreign currency but an impairment loss recognised in the functional currency).

Illustration

	(a) Date acquired At cost	(b) Year-end At NRV or RA	(b - a) Impairment loss
(1) Impairment test for:			
Inventories, in foreign currency	US\$10,000	US\$9,000	US\$(1,000)
Exchange rate RM per US\$	3.5	4.0	
Inventories, in functional currency	<u>RM35,000</u>	<u>RM36,000</u>	<u>RM nil</u>
(2) Impairment test for:			
Property, in foreign currency	S\$50,000	S\$51,000	S\$ nil
Exchange rate RM per S\$	2.5	2.2	
Property, in functional currency	<u>RM125,000</u>	<u>RM112,200</u>	<u>RM(12,800)</u>

Solution 10

(a) The functional currency of Apex Ltd is the US dollar. The transactions in Ringgit, namely the purchase of the office building and the placement of the Ringgit fixed deposit, are its foreign currency transactions. Accordingly, the measurement principles relating to foreign currency transactions should be applied in its US dollar accounts. The office building, being a non-monetary item, should be measured at its historical rate. Hence no exchange difference will arise on this item. The fixed deposit, being a monetary item, would be measured at the closing rate, and this produces an exchange loss of US\$100,000 (i.e. US\$500,000 - RM2,000,000 / 5) that should be recognised in its profit or loss.

The operating activities, in terms of revenue and expenses are denominated in the US dollar, which is the functional currency. Therefore, no exchange differences or further issues will arise in the recognition and measurement of these items.

As Apex's presentation currency differs from its functional currency, its financial statements would need to be translated to the Ringgit presentation currency. In the translation of the US dollar financial statements, the closing rate method should be applied.

(b) Translation of the financial statements - closing rate method

	Functional currency US\$	Exchange rate RM per US\$	Presentation currency RM
Revenue	2,000,000	AR = 4.5	9,000,000
Expenses	(1,000,000)	AR = 4.5	(4,500,000)
Exchange loss on Ringgit deposit	(100,000)	AR = 4.5	(450,000)
Profit for the year	900,000		4,050,000
OCI — Exchange reserve (bal.)	—		2,450,000
Equity capital	2,000,000	HR = 4.0	8,000,000
	<u>2,900,000</u>		<u>14,500,000</u>
Office building	500,000	CR = 5.0	2,500,000
Ringgit bank balance	400,000	CR = 5.0	2,000,000
US\$ bank balance	1,000,000	CR = 5.0	5,000,000
Trade receivables	1,000,000	CR = 5.0	5,000,000
	<u>2,900,000</u>		<u>14,500,000</u>

Proof of exchange reserve:

	US\$	Rate	RM
Opening net assets:	2,000,000		
Translated at opening rate		4.0	8,000,000
Translated at closing rate		5.0	10,000,000
Gain on translation of opening net assets			<u>2,000,000</u>
Retained profit for the year:	900,000		
Translated at average rate		4.5	4,050,000
Translated at the closing rate		5.0	4,500,000
Gain on translation of retained profit			<u>450,000</u>
Total gain on translation recognised in other comprehensive income			<u>2,450,000</u>

The gain is recognised in other comprehensive income to determine the total comprehensive income for the year. It is retained as an exchange translation reserve in equity.

Note that in the above example, the translated financial statements presented in the Ringgit would also be used for consolidation in Lapton's group accounts.

13.5 Translation of Financial Statements of Foreign Operations

A foreign operation is an entity that is a subsidiary, associate, joint venture, or a branch of the reporting entity, the activities of which are based or conducted in a country or currency other than those reporting entity. For a Malaysian parent entity, it is not necessary that its foreign operation must be located in another country. It may own a subsidiary that is incorporated and located in Malaysia, but if that subsidiary conducts its business in a functional currency other than that of the parent, that subsidiary is a foreign operation. Conversely, the Malaysian parent may own a subsidiary located in another country, but if that subsidiary conducts its business in the same functional currency as that of the parent, that subsidiary, although a foreign operation, is considered to be an integral part of the parent's operations.

With regard to selecting a translation method, MFRS 121 changes the requirements of the original IAS 21 by not distinguishing between integral foreign operations and foreign entities. Instead, all overseas subsidiaries, branches, associates and joint ventures are now classified as foreign operations. As a result of applying the functional currency concept:

- there is no longer a distinction between integral operations and foreign entities. Instead, an entity that was previously classified as an integral foreign operation will have the same functional currency as the reporting entity (the need to translate to the function currency would not arise); and
- only one translation method is prescribed for foreign operations, i.e., the closing rate method that was applied to foreign entities under the original IAS 21.

13.5.1 The Closing Rate Method

When the closing rate method is used, exchange differences can arise from three sources, as follows:

- translating the opening net assets in the foreign operation at an exchange rate different from that at which it was previously reported;
- translating the income and expense items (net retained profit for the period) at the exchange rates at the dates of transactions (or at a rate that approximates the actual rates, such as the average rate) but assets and liabilities at the closing rate; and
- other changes to equity in the foreign entity, such as an asset revaluation.

Example 11

Assume that R Bhd, whose functional currency was the Malaysian Ringgit, incorporated a wholly owned subsidiary, S Pte Ltd, in Singapore on 1 January 20x3. The paid up capital of S Pte Ltd was S\$10 million and R Bhd paid the investment on that date. S Pte Ltd was classified as a foreign operation. The exchange rate ruling on 1 January 20x3 was RM1.80 per unit of S\$.

The relevant exchange rates per unit of S\$ were as follows:

Average for the year:	RM2.20
30 September 20x3:	RM2.40
31 December 20x3:	RM2.60

Consolidated Statement of Profit or Loss and Other Comprehensive Income For the year ended 31 December 20x3		RM'000	RM'000
Other comprehensive income:			
Revaluation surplus (10,000 + 1,333)			11,333
Exchange translation gain			2,725
Total comprehensive income for the year			<u>27,610</u>

Consolidated Statement of Changes in Equity For the year ended 31 December 20x3					
	Share capital	Revaluation reserve	Exchange translation reserve	Retained profits	Total Equity
	RM'000	RM'000	RM'000	RM'000	RM'000
Balance b/forward	20,000	—	—	—	20,000
Total comprehensive income for the year	—	11,333	1,750	5,250	27,610
Dividends paid	—	—	2,725	13,552	27,610
Balance c/forward	<u>20,000</u>	<u>11,333</u>	<u>4,475</u>	<u>14,802</u>	<u>50,610</u>

13.5.2 Accounting Records Not Kept in the Functional Currency — Remeasurement

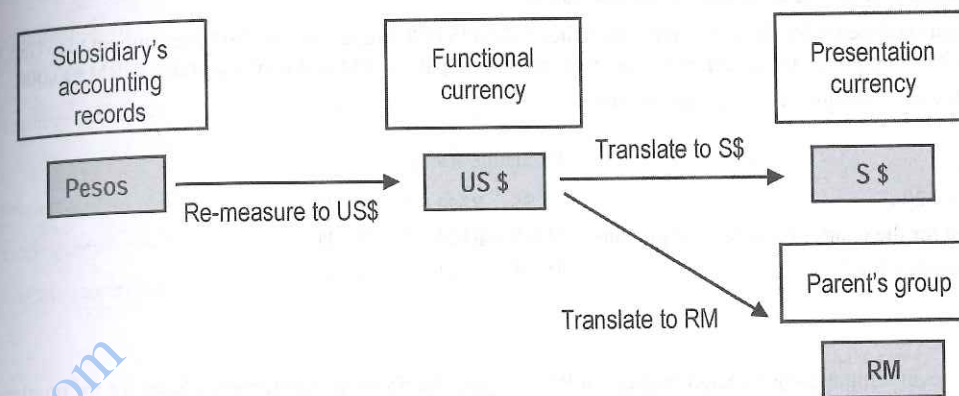
Complications may arise if a Malaysian overseas subsidiary keeps its accounting records in its local currency (normally required for compliance with the local statutes), which is not its functional currency. MFRS 121 clarifies that “when an entity keeps its books and records in a currency other than its functional currency, at the time the entity prepares its financial statements all amounts are translated into the functional currency, so as to produce the same amounts in the functional currency as would have occurred had the items been recorded initially in the functional currency”.

In this case, a re-measurement of the items in the entity’s accounts is required, such as monetary items are translated into the functional currency using the closing rate and non-monetary items that are measured on a historical cost basis are translated using the respective exchange rates at the dates of the transactions that resulted in their recognition. Exchange differences (gains and losses) arising on translating monetary items shall be recognised in profit or loss. Such translation procedures for re-measurement are often known as the “temporal method” in the accounting literature.

For example, assume that a Philippines subsidiary keeps its accounting records in the Philippines Pesos although its functional currency is the US dollar. In such cases, the Philippines Pesos accounts of the subsidiary should first be re-measured to the US dollar functional currency accounts before they are translated to the Ringgit for consolidation at the parent’s group accounts, and/or translated to other currencies for presentation purposes. Similarly, if a subsidiary of a Malaysian parent keeps its accounting records in Ringgit, but its functional currency is the US\$, the Ringgit financial statements of the subsidiary shall first be remeasured in the US\$, and then translated to the Ringgit for consolidation.

Note that the need for re-measurement can be avoided if an entity, in such circumstance, implements a dual accounting system by maintaining two sets of accounts, one to comply with the local laws and the other to comply with MFRS 121.

The flowchart below may help you visualise the accounting procedures.



The table below provides an analysis of the procedures for consolidation in hypothetical cases of subsidiaries’ accounting records and functional currencies:

Table 1: Accounting Records, Functional Currency and Consolidation Procedure

Subsidiary	Currency of accounting records	Functional currency	Procedures for consolidation of a Malaysian parent with a Ringgit presentation currency
In Malaysia	Ringgit	Ringgit	Consolidate directly the Ringgit accounts
In Labuan	US dollar	US dollar	Translation to Ringgit for consolidation
In Penang	Ringgit	US dollar	Re-measurement to US dollar, and Translation to Ringgit for consolidation
In Indonesia	Rupiah	Ringgit	Re-measurement to Ringgit, and consolidate thereafter (an integral operation)
In Hong Kong	HK dollar	US dollar	Re-measurement to US dollar, and Translation to Ringgit for consolidation

13.5.3 Keeping a Dual System or Remeasurement

The following example illustrates how keeping a dual system or remeasurement using the temporal method should produce the same results.

Example 13

Sago Sdn Bhd set up operations on 1 January 20x7 with a paid up capital of RM10,000,000 contributed by its parent. On this date, it obtained a USD loan of US\$2,500,000 from a foreign bank and converted the loan to RM10,000,000 at an exchange rate of RM4.00 to one USD. The loan carried an interest rate of 6% per annum.

On 1 January 20x7, Sago purchased a building for RM15,000,000 paid in cash. The balance of the cash contribution was kept in an RM bank account.

The retained profit for the year is RM2,120,000 (i.e., RM2,614,000 - RM494,000). Alternatively, it can be established by the difference between the opening and closing net assets in Ringgit. The exchange difference is then found as the balancing figure in the statement of profit or loss. This procedure is illustrated below:

Retained profit for the year from translation of the subsidiary's statement of profit or loss	RM'000
Exchange gain - balancing	1,715
Retained profit for the year - difference between closing and opening net assets (RM5,447 - RM1,994 - RM1,333)	405
	<u>2,120</u>

The exchange difference arising can be established as follows:

	P\$'000	RM'000	RM'000
Opening monetary items:			
P\$1,850 @ closing rate of 4		462.5	
P\$1,850 @ opening rate of 6		<u>308</u>	
			154.5 gain
Increase in short-term net monetary assets during the year			
Retained profit	6,160	1,715	
Add: Non-fund depreciation item	<u>850</u>	<u>128</u>	
	7,010	1,843	
Less: Increase in inventories	<u>2,000</u>	<u>841</u>	
	<u>5,010</u>	1,002	
Translated at closing rate P\$5,010 @ 4		<u>1,252.5</u>	
Total exchange gain			<u>250.5 gain</u> <u>405 gain</u>

The exchange gain of RM405,000 can then be incorporated in the consolidated statement of profit or loss and other comprehensive income, as follows:

Consolidated Statement of Profit or Loss and Other Comprehensive Income
For the year ended 31 December 20x3

Revenue (60,000 + 5,000)	RM'000
Less: Cost of goods sold	65,000
Opening inventories (6,000 + 571)	6,571
Purchases (38,000 + 3,200)	<u>41,200</u>
	47,771
Closing inventories (8,000 + 1,412)	<u>(9,412)</u>
	<u>38,359</u>

Consolidated Statement of Profit or Loss and Other Comprehensive Income
For the year ended 31 December 20x3

Gross profit	RM'000
Expenses (6,400 + 398)	26,641
Exchange gain on translation	(6,798)
Profit before taxation (17,600 + 2,243 + 405)	405
Taxation (5,280 + 528)	20,248
Profit after taxation	(5,808)
Other comprehensive income:	14,440
Revaluation surplus	11,333
Total comprehensive income for the year	<u>25,773</u>

Consolidated Statement of Changes in Equity
For the year ended 31 December 20x3

	Share capital	Revaluation reserve	Retained profits	Total Equity
	RM'000	RM'000	RM'000	RM'000
Balance brought forward	20,000	-	5,494	25,494
Total comprehensive for the year	-	11,333	14,440	25,773
Dividends paid	-	-	(4,000)	(4,000)
Balance carried forward	<u>20,000</u>	<u>11,333</u>	<u>15,934</u>	<u>47,267</u>

13.5.5 Translation of Goodwill and Fair Value Adjustments of a Foreign Operation

In the earlier examples, we have not discussed the issue of goodwill and fair value adjustments on acquisition of a foreign operation. Note that these two items arise only at the group consolidation level when the permanent adjustments are performed. And because they arise on consolidation, past practices preferred to treat them as assets of the parent and therefore measured or translated them at their historical rate.

The issue that needs to be addressed is whether goodwill and fair value adjustments of a foreign operation should be treated as assets and liabilities of the foreign operation (in which case, they should also be translated at the closing rate) or assets and liabilities acquired by the local parent company (in which case, they should be recorded at their historical costs). The original IAS 21 permitted either treatment. However, MFRS 121 and MPERS both require that "any goodwill arising on the acquisition of a foreign operation and any fair value adjustments to the carrying amount of assets and liabilities of that foreign operation shall be treated as assets and liabilities of the foreign operation. Thus, they shall be expressed in the functional currency of the foreign operation and shall be translated at the closing rate" [MFRS 121.47].

Note that it is still necessary to use the historical rate to translate the share capital and pre-acquisition reserves of the foreign operation so that the original goodwill on combination can be established. The resulting goodwill and any fair value adjustment are then translated at the closing rate in any subsequent consolidation of the foreign operation.